JOHNSON CONTROLS

Johnson Controls, Inc.
Former Stanley Tools Facility
Fowlerville, Michigan

SUMMARY REPORT
RCRA FACILITY INVESTIGATION
TASK 10
RFI REPORT

October 2001

VOLUME II APPENDICES

U. S. EPA Administrative Order by Consent
Docket No V-W-88R-032

APPENDIX A

APPENDIX A

ADMINISTRATIVE ORDER BY CONSENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:
5HR-12

SEP 6 - 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Brenda J. Bemben, Esquire
Assistant General Counsel
The Stanley Works
1000 Stanley Drive
New Britain, Connecticut 06050

Re: Administrative Consent Order
The Stanley Works, Fowlerville,
Michigan
MID 099 124 299

Dear Ms. Bemben: V-W- 88 R-0330

This letter is to acknowledge receipt of the Consent Order signed by The Stanley Works. A fully executed copy of the Consent Order is enclosed for your files.

Your cooperation in resolving this matter is appreciated.

Sincerely yours,

for William E. Muno, Acting
Associate Division Director
Office of RCRA

Enclosure

cc: David Slayton, MDNR
Alan Howard, MDNR

CERTIFICATE OF SERVICE

I hereby certify that I have caused a copy of the foregoing Administrative Consent Order V-W-88-R-032 to be served upon the person designated below, on the date below, by causing said copies to be deposited in the U.S. Mail, First Class and certified-return receipt requested, postage prepaid, at Chicago, Illinois in envelopes addresed to:

Brenda J. Bemben, Esquire
Assitant General Counsel
The Stanley Works
1000 Stanley Drive
New Britain, Connecticut

I have further caused the original of the Administrative Consent Order and this Certificate of Service to be filed in the Office of the Regional Hearing Clerk located in the Planning and Management Division, U.S. EPA, Region V, 230 South Dearborn Street, Chicago, Illinois 60604, on the date below.

These are said person's last address known to the subscriber.

Dated this 6 day of September, 1988.

Secretary, Office of RCRA
U.S. EPA, Region V

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED
SEP 06 1988
REGIONAL HEARING CLERK
U.S. ENVIRONMENTAL
PROTECTION AGENCY

IN THE MATTER OF: THE STANLEY WORKS 425 FRANK STREET FOWLERVILLE, MICHIGAN EPA I.D. NO. MID 099 124 299 Proceeding under Section 3008(h) of the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h).	ADMINISTRATIVE ORDER BY CONSENT U.S. EPA DOCKET NO. V-W- 88 R-032

I. JURISDICTION

This ADMINISTRATIVE ORDER BY CONSENT (Consent Order) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (U.S. EPA) by Section 3008(h) of the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, (RCRA), 42 U.S.C. §6928(h), and delegated to the Regional Administrators by U.S. EPA Delegation Nos. 8-31 and 8-32, signed on April 16, 1985, and May 15, 1986, respectively.

This Consent Order is entered into by the U.S. EPA and by The Stanley Works (Stanley), 1000 Stanley Drive, P.O. Box 7000, New Britain, Connecticut, which owns a facility located at 425 Frank Street, Fowlerville, Michigan, pursuant to Section 3008(h) of RCRA, 42 U.S.C. §6928(h). Stanley agrees to undertake all actions required by the terms and conditions of this Consent Order, and consents to and will not contest U.S. EPA jurisdiction regarding this Consent Order.

II. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objective of the U.S. EPA and Stanley is to perform a RCRA Facility Investigation (RFI) as set forth in the RFI Scope of Work and Task 3: RFI Strategy which are incorporated into and made part of this Order as Attachments I and II, respectively, to determine the nature and extent of any release of hazardous waste and constituents at or from the solid waste management units at the facility owned by The Stanley Works since January 1980 and operated between January 1980 and December, 1985 by Stanley Tools, a division of the The Stanley Works, at 425 Frank Street, Fowlerville, Michigan (the Facility).

III. FINDINGS OF FACT

Based upon information available on the effective date of this Consent Order, the Regional Administrator of the U.S. EPA makes the following findings of fact:

A. The Respondent to this Consent Order is The Stanley Works, 1000 Stanley Drive, P.O. Box 7000, New Britain, Connecticut, which owns a facility located at 425 Frank Street, Fowlerville, Michigan. Stanley is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. §6903(15).

B. Stanley is the current owner of the Facility, and has owned and operated the Facility, which fabricated, finished and plated zinc die castings, since January 11, 1980, on which date Stanley purchased the Facility from Hoover Universal, Inc., a Michigan corporation (Hoover Universal). Stanley ceased manufacturing at the Facility in December 1985.

C. From January 11, 1980, until October 1985, Stanley generated, treated, or stored hazardous waste, as defined in the RCRA regulations,

at the Facility. Metal hydroxide sludge was accumulated in surface impoundments used as settling ponds within a system permitted under the National Pollutant Discharge Elimination System, first by Hoover Universal, and subsequently by Stanley. In October 1980, approximately 97,000 gallons of metal hydroxide sludge were pumped out of the surface impoundments by Chem-Met Services of Wyandotte, Michigan and transported to the Chem-Met facility for disposal. Sludge remaining in the surface impoundments became regulated as U.S. EPA Hazardous Waste No. F006 under RCRA on November 19, 1980. At various times between November 19, 1980, and October 7, 1985, metal hydroxide sludge was pumped out of the surface impoundments and transported off-site for disposal in accordance with applicable RCRA regulations. On October 7, 1985, Stanley ceased adding waste to the surface impoundments and began closure of the impoundments.

D. On August 12, 1980, Stanley submitted a notification of hazardous waste activity at the Facility as required by Section 3010(a) of RCRA, 42 U.S.C. §6930(a).

E. On June 11, 1981, Stanley submitted to U.S. EPA a RCRA Part A permit application as required by Section 3005(a) of RCRA, 42 U.S.C. §6925(a). Though in violation of time requirements of U.S. EPA regulations, Stanley 's Part A permit application was accepted as if timely filed.

F. The Facility consists of approximately 11.7 acres of land located at 425 Frank Street, Fowlerville, Michigan, located in the SE 1/4 of Section 10, and the NE 1/4 of Section 15, Township 3 North, Range 3 East, Fowlerville, Michigan. It is located on the southwest edge of Fowlerville just east of the Red Cedar River.

G. The solid waste management units at the Facility consist of four excavated surface impoundments, old settling ponds, and chem-fixed material areas (see Figure 5 of Task 1: Description of Current Conditions, which has been approved by U.S EPA and is incoporated herein as Attachment III). The four excavated surface impoundments were constructed by Hoover Universal circa 1969 and used by Hoover Universal, and later by Stanley, in connection with the operation of the Facility. On two occasions, one in approximately 1972 and one in approximately 1973, sludge from these impoundments was pumped out and treated using the "Chem-fix" process. Some of the chem-fixed material was deposited on-site; some was removed from the site for off-site disposal. Four old settling ponds were also operated at the Facility by Hoover Universal. When the four old ponds were taken out of service, sludge from these ponds was deposited on-site. (See Figure 5 of Task 1, Attachment III). In addition, a metal hydroxide sludge pile was noted outside of the present lagoon fence line by a Michigan Department of Natural Resources (MDNR) inspector on September 16, 1985.

H. Based upon records submitted by Stanley pursuant to the requirements of RCRA, hazardous wastes which have been received and stored at the Facility during Stanley's ownership and operation of the Facility consist of the following:

F006 - Wastewater treatment sludges from electroplating operations, specifically from the fabrication, finishing and plating of zinc die castings.

F007 - Spent cyanide plating bath solutions from electroplating operations.

F009 - Spent stripping and cleaning bath solutions from electroplating operations where cyanide is used in the process.

D007 - Solid waste that exhibits the characteristic of EP toxicity for chromium.

D002- Solid waste that exhibits the characteristic of corrosivity.

Additional hazardous wastes may have been treated, stored, or disposed of at the Facility by Hoover Universal prior to Stanley's ownership or operation of the Facility.

I. Based upon groundwater monitoring reports submitted by Stanley, pursuant to the requirements of RCRA, information contained in U.S. EPA files, and results of a Water Quality and Biological Investigation of the Red Cedar River by the MDNR in 1976 and 1978, hazardous waste or hazardous waste constituents which have been detected in groundwater monitoring wells at the Facility or in sediments or bank samples from the Red Cedar River include the following:

SEDIMENTS

Chromium	20,000 mg/kg		
Nickel	2,000 mg/kg	PCB-1242	12,000 ug/kg
Zinc	11,000 mg/kg	PCB-1260	6,200 ug/kg
Cyanide	810 mg/kg	Chromium	4,600 mg/kg
Copper	7,800 mg/kg		
Cadmium	0.6 mg/kg		

GROUNDWATER

Cadmium 0.008 mg/l	Zinc 33 mg/l	1,2 Dichloroethene 1100 ug/l
Chromium 0.19 mg/l	Gross beta 160 pCi/l	1,1 Dichloroethane 17 ug/l
Copper 0.26 mg/l	Mercury 0.17 mg/l	Arsenic 66 mg/l
Cyanide 0.11 mg/l	Lead 0.2 mg/l	Ethyl Benzene 8.9 ug/l
Nickel 0.39 mg/l	Trichloroethene 29 ug/l	Phenol 2.0 ug/l

J. Based on information submitted by Stanley, pursuant to RCRA, Stanley is in the process of closing its hazardous waste management units.

K. On October 17, 1985, the MDNR submitted a Facility Management Plan to the U.S. EPA that included a Preliminary Assessment/Site Investigation of the Facility. Based on data presented in the Facility Management Plan, there have been releases of hazardous constituents to the groundwater by seepage

from the old settling ponds and chem-fixed areas (The solid waste management units of concern are identified in Figure 5 of Task 1/Attachment III).

L. Stanley does not admit to any of the factual or legal determinations made by the U.S. EPA and reserves all rights and defenses which Stanley may have regarding liability or responsibility regarding the Facility.

IV. DETERMINATIONS

As a result of the Findings of Fact set forth above, the U.S. EPA has determined that:

A. The Facility has interim status pursuant to Section 3005(e) of RCRA, 42 U.S.C. §6925(e) and 40 CFR 270.10(e).

B. There are or have been releases of hazardous wastes or hazardous waste constituents from the Facility into the environment within the meaning of Section 3008(h) of RCRA, 42 U.S.C. §6925(h).

C. The actions and response measures required by this Consent Order are consistent with RCRA, are necessary to ascertain the nature and extent of any release at the Facility, are consistent with the National Contingency Plan promulgated by the U.S. EPA under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), and are consistent with protection of human health and the environment.

V. COMPUTATION OF TIME

In computing any period of time prescribed in this Consent Order, the day of the act from which the designated period of time begins shall not be included. The term "business day" does not include any day designated as a holiday by the President or the Congress of the United States or by the state of Michigan, or any Saturday or Sunday.

VI. RFI WORK TO BE PERFORMED

A. Stanley shall perform a RCRA Facility Investigation Study (RFI) of hazardous waste constituents being released into the environment at or from the Facility as set forth in the RFI Scope of Work (Attachment I) and Task 3 (Attachment II). All work performed by Stanley pursuant to this Consent Order shall be under the direction and supervision of a qualified professional geologist or engineer. The U.S. EPA approves Stanley's use of these named consulting firm(s) to perform the RFI. The U.S. EPA agrees that Dames & Moore, a Professional Limited Partnership, is qualified to direct and supervise the RFI work at the Facility. Stanley's use, for RFI work at the Facility, of any geologist, engineer, contractors and/or subcontractors not previously approved by the U.S. EPA shall first be subject to approval by the U.S. EPA, which approval shall not be unreasonably withheld or delayed. U.S. EPA further agrees that Jersey West, Inc. is qualified to perform RFI work at the Facility, and that Aqualab, Inc. is qualified to perform analytical RFI work upon successful completion of Task 4: Quality Assurance/Quality Control Procedures.

B. All planned RFI work, as embodied in the Scope of Work and Task 3, attached hereto, is consistent with the U.S. EPA draft "Guidance on Remedial Investigations under RCRA, "(4 Volumes) dated July, 1987, and with the guidelines, criteria and considerations set forth in the National Contingency Plan, 40 CFR Part 300.68, as amended.

C. All RFI work shall be executed in conformance with the U.S. EPA draft "Guidance on Remedial Investigations Under RCRA", dated July, 1987, and shall be consistent, as appropriate, with the guidelines, criteria and considerations set forth in the National Contingency Plan, 40 CFR Part 300.68, as amended.

D. Attachments I and II to this Consent Order are the Scope of Work and Task 3: RFI Strategy, respectively. Attachments I and II are incorporated into and made a part of this Consent Order. All RFI work shall be conducted in accordance with the standards, specifications and schedules contained therein.

E. Based on the foregoing, it is hereby AGREED TO AND ORDERED that the following RFI work shall be performed:

1. Within ten weeks of the effective date of this Consent Order, Stanley shall submit to the U.S. EPA for review and approval plans for: Task 2, Project Management Plan; Task 4, Quality Assurance/Quality Control Procedures; Task 5, Data Management Plan; Task 6, plan for Identification of Potential Receptors; Task 7, Health and Safety Plan; Task 8, Community Relations Plan; and Task 9, Plan for Site Security Evaluation and Upgrading. These submittals shall be in accordance with Attachment A, "RCRA Facility Investigation Schedule", contained in the pre-approved Task 3: RFI Strategy.

2. Task 10, Phase I Report, Phase II Work Plan, and draft RFI Report shall be completed and submitted to U.S. EPA according to the schedule contained in Attachment A to Task 3: RFI Strategy.

3. Task 11, Draft Preliminary Evaluation of Corrective Measures Technologies Report (if required), and a final RFI Report and a final Preliminary Evaluation of Corrective Measures Technologies Report (if required) shall be submitted according to the schedule contained in Attachment A to Task 3: RFI Strategy.

4. Within twenty (20) business days of receipt of the U.S. EPA notification of disapproval of any Task plans and any associated support documents, or any parts thereof, Stanley shall amend and submit to the U.S. EPA a revised Task Plan, and/or revised associated support documents.

VII. REPORTS

A. Stanley shall provide bi-monthly, i.e. once every other month, written progress reports to the U.S. EPA with a copy to the MDNR. At a minimum, these progress reports shall: (1) describe the actions which have been taken toward achieving compliance with this Consent Order; (2) include all results of sampling tests and all other data received by Stanley during the applicable reporting period; (3) include a summary of all plans and procedures completed during the past reporting period as well as such actions, data, and plans which are scheduled for the next reporting period; and (4) include any schedule or technical problems and what is being done to resolve the problems. These reports are to be submitted to the U.S. EPA and MDNR by the fifteenth day of the reporting month starting with the second month following the effective date of this Consent Order.

B. In addition to the foregoing bi-monthly written progress reports, Stanley shall provide additional plans or reports to the U.S. EPA as required in and according to, the schedule contained in the Task 3: RFI Strategy.

C. The U.S. EPA shall review such additional plans or reports (other than the bi-monthly written progress reports and Task 4: Quality Assurance/Quality Control Procedures), and within twenty-five (25) business days after receipt of such plans or reports, the U.S. EPA shall notify Stanley in writing of its concurrence or non-concurrence with the report and with the conclusions drawn therein. U.S. EPA non-concurrence with the conclusions in such plans or reports shall not constitute a violation of this Consent Order and is therefore not subject to the procedures of Section XV, Dispute Resolution. U.S. EPA reserves the right to make U.S. EPA's own conclusions, should U.S. EPA not concur with the conclusion drawn therein. Any U.S. EPA concurrence,

non-concurrence, and conclusions, and the reasons therefor, shall be set forth in the abovereferenced written notice to be issued by U.S. EPA to Stanley.

D. The U.S. EPA retains the right to perform additional studies, and/or to conduct an RFI.

E. Documents, including reports, concurrences, non-concurrences and other correspondence to be submitted pursuant to this Consent Order, shall be sent by certified mail, return receipt requested or by overnight delivery service, to the following addresses, or to such address as Stanley or the U.S. EPA hereafter may designate in writing:

1. Documents to be submitted to the U.S. EPA should be sent to:

United States Environment Protection Agency
Hazardous Waste Enforcement Branch, 5HE-12
RCRA Enforcement Section
230 South Dearborn Street
Chicago, Illinois 60604.
ATTN: Project Coordinator Joseph L. Baker

2. Documents to be submitted to Stanley should be sent to:

Brenda J. Bemben, Esq.
General Counsel and Assistant Secretary
The Stanley Works
1000 Stanley Drive
P.O. Box 7000
New Britain, Connecticut 06050

3. Documents to be submitted to MDNR should be sent to:

(Regular mail)

David Slayton
Michigan Department of
Natural Resources
Hazardous Waste Division
P.O. Box 30028
Lansing, Michigan 48909

(Overnight delivery)

David Slayton
Michigan Department of
Natural Resources
Hazardous Waste Division
608 West Allegan
Lansing, Michigan 48933

VIII. ADDITIONAL WORK

Consistent with the objectives of this Consent Order, and the Task 3: RFI Strategy, U.S. EPA may determine that certain tasks, including

investigatory work or engineering evaluation, are necessary, in addition to the work described in pre-approved Task 3, to fully determine the nature, rate and extent of contamination at or having emanated from the Facility. If U.S. EPA determines that such additional work is necessary, U.S. EPA shall request in writing that Stanley perform the additional work and shall specify the basis and reasons for U.S. EPA's determination that the additional work is necessary. Stanley shall have the opportunity to meet with U.S. EPA within seven days of Stanley's receipt of U.S. EPA's request for additional work to discuss the additional work U.S. EPA has requested and to propose alternatives. Within twenty-one (21) days of receipt of U.S. EPA's request for work, Stanley shall notify U.S. EPA in writing of any decision whether or not to undertake the additional work. Any additional work performed by Stanley under this paragraph shall be performed in a manner consistent with this Consent Order, and as set forth in the Task 3: RFI Strategy.

IX. PROJECT COORDINATORS

A. On or before the effective date of this Consent Order, the U.S. EPA and Stanley shall each designate a Project Coordinator. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Order. The U.S. EPA Project Coordinator will be the U.S. EPA designated representative at the Facility. To the maximum extent possible, communications between Stanley and the U.S. EPA, and all documents, reports, approvals and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Order, shall be directed through the Project Coordinators.

B. The U.S. EPA and Stanley each have the right to change their

respective Project Coordinator. Such a change shall be accomplished by notifying the other parties in writing at least ten (10) business days prior to the change.

C. The U.S. EPA Project Coordinator shall have the authority to halt any RFI work in emergency situations where human life or health is threatened or when specific provisions of the RFI Scope of Work are not being followed. The U.S. EPA Project Coordinator shall notify Stanley immediately if he/she determines that specific provisions of the RFI Scope of Work are not being followed. In addition, the U.S. EPA Project Coordinator shall have all the applicable authority provided by Federal laws and regulations.

D. The absence of the U.S. EPA Project Coordinator from the Facility shall not be cause for stoppage of work. During the course of implementation of the Consent Order, the Project Coordinators shall, whenever possible, operate by consensus, and shall attempt to resolve disputes informally through good faith discussion of the issues.

X. COMPLIANCE WITH APPLICABLE LAWS

All work undertaken by Stanley pursuant to this Consent Order shall be performed in compliance with all applicable Federal, State and local laws and regulations including all applicable Occupational Safety and Health Administration and Department of Transportation regulations. Stanley shall be responsible for obtaining all State, Federal and local permits which are necessary for the performance of the work within a time frame that will allow the RFI to proceed in a manner contemplated by schedules included in and developed pursuant to this Consent Order. Failure to apply for any required permits or approvals in a timely manner, or to provide all reasonably required information therefor in a timely manner, or to accept

or meet reasonable terms or conditions in a timely fashion, is not, in and of itself, a Force Majeure event. Delays in the permitting process which are not attributable to Stanley and which cannot be overcome by Stanley's exercise of due diligence shall constitute a Force Majeure event which shall postpone Stanley's required performance under this Consent Order to the extent of the delay occasioned by such delays in the permitting process.

XI. SAMPLING, ACCESS, AND DATA/DOCUMENT AVAILABILITY

A. Stanley shall make the results of all sampling and/or tests or other data generated by Stanley, or on behalf of Stanley, pursuant to implementation of this Consent Order, available to the U.S. EPA, and shall submit these results in the bi-monthly progress reports as described in Section VII, Reports.

B. Stanley shall provide split or duplicate samples to the U.S. EPA or MDNR of any samples collected by Stanley pursuant to the implementation of this Consent Order, provided that the U.S. EPA requests such split or duplicate samples at least forty-eight (48) hours in advance of the day such samples are to be collected and provided further that a sufficient quantity of sampling material is available on the day of sampling. Stanley shall notify the U.S. EPA, orally or in writing, not less than seven (7) calendar days in advance of any sample collection activity.

C. The U.S. EPA and/or any authorized representatives of the U.S. EPA shall have access to the Facility at all reasonable times for purposes including, but not limited to, inspecting records, operating logs and contracts related to the Facility; reviewing the progress of Stanley in

carrying out the terms of this Consent Order; conducting such tests and activities as the U.S. EPA and/or Project Coordinator deems necessary; using a camera, sound recording device, or other documentary type equipment; and verifying the data submitted to the U.S. EPA by Stanley. Upon request, U.S. EPA shall provide a copy of such information obtained or recorded to Stanley which Stanley shall bear the costs of reproducing.

D. Pursuant to applicable Federal laws and regulations, Stanley may assert a business confidentiality claim with respect to any or all of the information requested, submitted or gathered pursuant to the terms of this Consent Order. Analytical data shall not be claimed as confidential by Stanley. Any confidentiality claims will be handled in accordance with 40 CFR Part 2. Information claimed confidential shall be protected from release unless U.S. EPA makes a formal determination that such information is not eligible for confidential treatment. The U.S. EPA shall offer Stanley an opportunity to make a claim of confidentiality with respect to any information gathered from Stanley or gathered at the Facility. If no such claim accompanies the information when it is submitted to the U.S. EPA, or if no claim is made when the U.S. EPA offers Stanley an opportunity to review the information that the U.S. EPA has gathered, by whatever method, or if the information is determined not to be confidential in accordance with applicable Federal laws and regulations, the information may be made available to the public by the U.S. EPA. The U.S. EPA shall provide written notice to Stanley in the event of any such determination that information is not eligible for confidential treatment.

E. The U.S. EPA shall make the results of all sampling and/or tests or other data generated by or on behalf of the U.S. EPA, concerning the Facility,

available to Stanley and shall provide a copy of all such information to Stanley within fifteen (15) business days of its availability. The U.S EPA shall notify Stanley, orally or in writing, not less than seven (7) calendar days in advance of any sample collection activity by or on behalf of the U.S. EPA. The U.S. EPA shall provide split or duplicate samples to Stanley of any samples collected by or on behalf of the U.S. EPA at or in the vicinity of the Facility, provided that Stanley requests such split or duplicate samples at least forty-eight (48) hours in advance of the day such samples are to be collected and provided that a sufficient quantity of sampling material is available on the day of sampling.

XII. RECORD PRESERVATION

Stanley agrees to preserve, during the pendency of this Consent Order, and for a minimum of three (3) years after termination of this Consent Order, all final records and documents in the possession of Stanley concerning the Facility which are generated or maintained pursuant to RCRA or which relate in any way to this Consent Order. After this three (3) year period, Stanley shall notify the U.S. EPA prior to the destruction of any such documents and upon request by the U.S. EPA, Stanley shall make all such records available to the U.S. EPA. Nothing herein shall constitute a waiver by Stanley of attorney-client or attorney work product privileges.

XIII. DELAY IN PERFORMANCE/STIPULATED PENALTIES

A. At the discretion of U.S. EPA, for each full week that Stanley fails to submit either: a (1) Laboratory Certification; (2) Draft RFI Report; or (3) Final RFI Report; the U.S. EPA may assess a stipulated penalty in the amount of up to $5,000.00 per each full week. Any such penalty shall be

paid within twenty (20) business days after Stanley's receipt of the U.S. EPA's written notification of penalty assessment for failure to submit any document described in this paragraph A.

B. All civil penalties which are assessed pursuant to the requirements of this Section XIII shall be paid by check to the Treasurer of the United States, and shall be forwarded to the U.S. Environmental Protection Agency, P.O. Box 70753, Chicago, Illinois 60673.

C. U.S. EPA may assess interest and penalties on any amount overdue under the terms of this Section XIII at the rate established by the Secretary of the Treasury pursuant to 31 U.S.C §3717. A late payment handling charge of twenty dollars ($20.00) will be imposed on any late payment, with an additional charge of ten dollars ($10.00) for each subsequent thirty (30) day period over which an unpaid balance remains. In addition, a six percent (6%) per annum penalty will be applied on any principal amount not paid within ninety (90) days of the date on which each payment is due.

D. The stipulated penalties set forth in this Section XIII do not preclude the U.S. EPA from electing to pursue any other injunctive or declaratory remedies or penalties which may be available to the U.S. EPA by reason of failure of Stanley to comply with any of the requirements specified in Paragraphs A, B and C of this Section XIII.

XIV. FINANCIAL ASSURANCE

Within thirty (30) days of the effective date of final regulations specifying financial assurance requirements applicable to this Consent Order (certain financial assurance regulations for corrective action are proposed at 51 Fed. Reg. 37854 (Oct. 24, 1986)) Stanley shall provide such evidence of financial assurance as is required by such final regulations.

XV. DISPUTE RESOLUTION

A. The parties shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion. If, however, disputes arise concerning this Consent Order including, but not limited to, implementation of the Task 3: RFI Strategy or any other obligation assumed hereunder, which the parties are unable to resolve informally, the following procedures shall be followed, subject to the exception expressed in Section VII, Reports. Either Stanley shall present a written notice of such dispute to the U.S. EPA, or the U.S. EPA shall present a written notice of such dispute to Stanley, which shall set forth the specific points of dispute, the position of the party presenting such notice and the basis therefor, and any actions which that party considers necessary. Within fifteen (15) business days after receipt of such written notice from the U.S. EPA, Stanley shall provide a written response setting forth the position of Stanley, any actions which Stanley considers necessary, and the basis for the position of Stanley. If Stanley does not so respond to the U.S EPA within the fifteen (15) business day time period, Stanley shall be deemed to agree with the position of the U.S. EPA, the dispute shall be deemed resolved in favor of the U.S. EPA, and Stanley shall be provided with written notification of such dispute resolution.

B. Within fifteen (15) business days after receipt of a written notice or response from Stanley pursuant to Paragraph A of this Section, if the U.S. EPA concurs with the position of Stanley, the dispute shall be deemed resolved in favor of Stanley, and Stanley shall be provided with written notification of such dispute resolution. This Consent Order shall be modified to include any necessary extension of time or variances of work. Within said fifteen (15) business days, if the U.S. EPA does not concur

with the position of Stanley, the dispute shall be deemed resolved in favor of U.S. EPA, and Stanley shall be provided with written notification of such dispute resolution.

C. During the pendency of dispute resolution procedures set forth in this Section, the time period for completion of work and/or obligations to be performed under this Consent Order which are affected by such dispute, shall be extended for a period of time not to exceed the actual time taken to resolve the dispute. Elements of the work and/or obligations not affected by the dispute shall be completed in accordance with the schedule contained in the Task 3: RFI Strategy.

D. Upon resolution of any dispute, Stanley shall immediately incorporate the resolution into the appropriate plan or procedures, and proceed with the work according to the amended plan or procedures.

E. Stanley will not legally challenge or contest the entry of this Consent Order or the jurisdiction of the U.S. EPA to issue this Consent Order.

XVI. RESERVATION OF RIGHTS

A. The U.S. EPA expressly reserves all rights and defenses that it may have pursuant to any available legal authority, including the right to conduct the RFI and to request additional work as set out in Section VIII, Additional Work.

B. Except as expressly provided in Section XV, Dispute Resolution, Paragraph E, Stanley expressly reserves all rights and defenses that it may have concerning any available legal authority.

C. Nothing herein is intended, including Section XXI, Termination and

Satisfaction, to release, discharge, or in any way affect any claims, causes of action or demand in law or equity against any person, firm, partnership or corporation, not a party to this Consent Order, from any liability it may have arising out of, or relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any hazardous substances, hazardous wastes, hazardous constituents, pollutants or contaminants at, to, or from the Facility. The parties to this Consent Order expressly reserve all rights, claims, demands, and causes of action they have against any and all other persons and entities who are not parties to this Consent Order.

D. The U.S. EPA and Stanley have entered into this Consent Order in good faith in order to assure protection of human health and the environment by ensuring that an appropriate study is conducted of releases of hazardous waste or hazardous waste constituents at or from the Facility. Stanley has executed this Consent Order without trial or adjudication of any issue of fact or law. Accordingly, neither Stanley's execution of this Consent Order, nor Stanley's compliance with any of the provisions hereof, shall be deemed or construed to be an admission of liability at any time or for any purpose.

E. Stanley reserves all rights that it may have to object to or contest any allegation of violation of this Consent Order.

F. Stanley reserves all rights it may have to withhold any document or record which is attorney-client or attorney work product privileged under Federal, State or common law.

XVII. INDEMNIFICATION OF THE UNITED STATES

Stanley agrees to indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising from, or on account of, acts or omissions of the Respondent, its officers, employees, receivers, trustees, agents, or assigns, in carrying out activities pursuant to this Consent Order. The U.S. EPA is not a party in any contract involving the Respondent at the Facility.

XVIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

A. The effective date of this Consent Order shall be seven (7) days from the date it is signed by Stanley and the Regional Administrator of the U.S. EPA, Region V. U.S. EPA agrees to provide a copy to Stanley by express mail on the day following execution by the Regional Administrator.

B. This Consent Order may be amended by mutual agreement of the U.S. EPA and Stanley. Any such amendments shall be in writing and shall have as the effective date that date on which such amendments are signed by Stanley and the Regional Administrator for U.S. EPA, Region V.

C. No informal advice, guidance, suggestions or comments by the U.S. EPA regarding reports, specifications, schedules and any other writing submitted by Stanley may be construed as relieving Stanley of its obligations to obtain such formal approval as may be required by this Consent Order.

XIX. PARTIES BOUND

A. This Consent Order shall apply to and be binding upon the U.S. EPA, Stanley and their agents, successors, and assigns.

B. No change in ownership, corporate, or partnership status relating to the Facility will in any way alter the status or responsibility of Stanley under this Consent Order unless this Consent Order is amended to reflect any such alteration.

C. The signatory of each of the parties to this Consent Order certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Order and to legally bind the party represented by such signatory to this document.

XX. FORCE MAJEURE

A. If any event occurs which causes delay in the achievement of any of the requirements of this Consent Order, Stanley shall have the burden of demonstrating that the delay was caused by circumstances beyond the reasonable control of Stanley and which could not have been overcome by due diligence. Stanley shall promptly notify the U.S. EPA's Project Coordinator orally and shall, within ten (10) calendar days of oral notification to the U.S. EPA, notify the U.S. EPA in writing of the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and the timetable by which Stanley intends to implement these measures.

B. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of Stanley, the time for performance hereunder shall be extended for a period equal to the delay period resulting from such circumstances.

C. In the event that the U.S. EPA and Stanley cannot agree that any delay in the achievement of the requirements of this Consent Order, including the failure to submit any report or document, has been or will be caused

by circumstances beyond the reasonable control of Stanley, the dispute shall be resolved in accordance with the provisions of Section XV, Dispute Resolution.

XXI. TERMINATION AND SATISFACTION

This Consent Order shall be deemed satisfied upon receipt by Stanley of written notice from the U.S. EPA that Stanley has demonstrated that all of the terms of this Consent Order, including any additional work which Stanley has agreed to perform pursuant to Section VIII, Additional Work, have been completed to the satisfaction of U.S. EPA. Upon such demonstration by Stanley, said written notice by U.S. EPA shall not be unreasonably withheld or delayed.

IT IS SO AGREED:

BY: _____ June 28, 1988
The Stanley Works
Respondent
Date

BY: _____ August 31, 1988
U.S. Environmental Protection Agency
Date

IT BEING SO AGREED, IT IS HEREBY ORDERED THIS DAY OF 2nd September 1988.

By: _____
Valdas V. Adamkus
Regional Administrator
U.S. EPA, Region V

APPENDIX B

APPENDIX B

UNIT A CLOSURE SAMPLE

CRE

STANLEY

THE STANLEY WORKS

Since 1843

NEW BRITAIN, CONNECTICUT 06050

(203) 225-5111

June 5, 1986

Mr. Jim Roberts
Michigan Dept. of Natural Resources
608 West Allegan Street
Lansing, Michigan 48909

Dear Jim:

Stanley Tools - Fowlerville is completing the closure of the surface impoundments that were used to settle metal hydroxide sludge. The actual work of removal commenced on October 7, 1985. All liquid sludge was removed in approximately ten days. The balance of the impoundments, including the vegetation, the exterior berms, interior walls, and approximately 1-1/2 feet from the bottom was removed. During November, 1985 the site experienced inclement weather and operations ceased.

We have conducted random sampling to determine whether or not additional soil needs to be removed. As per our discussion this morning, we have previously submitted to Mr. Richard Traub at USEPA Region 5 a summary of the activities on the lagoon and we indicated to him when we made this submission in February, 1986 that we would be proceeding with the remainder of the clean-up as soon as the weather permitted. We are anxious at this time to complete the closure.

I have enclosed for your review a copy of the random sampling analytical work, as well as a copy of the background borings upon which the clean standards were established. I have also included a drawing indicating the locations at which the random samples were taken. We have calculated the statistical limits for the clean standards according to the background borings.

I will be in contact with you Friday, June 6th, to discuss this submission. Stanley Tools - Fowlerville is interested in completing the closure. However, I am concerned that to reach the clean standards of the background borings, we would need to excavate an additional three feet of soil at an appxoximate cost of $600,000. Looking at the data, it appears that we would meet the environmental concerns of the site by excavating in many cases one additional foot. Your consideration of this request will be appreciated.

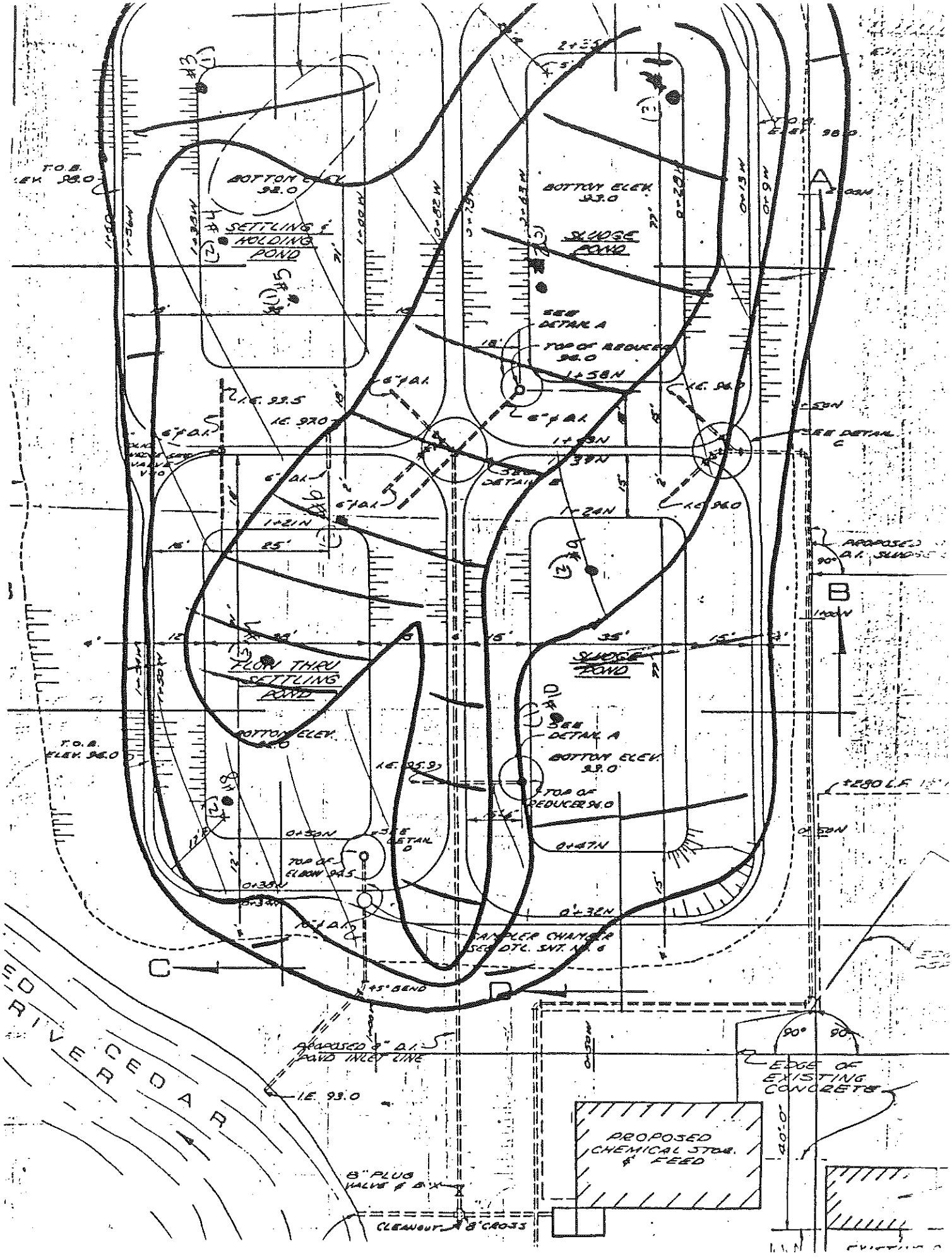
Thank you.

Yours very truly,

as

Delia M. Christensen
The Stanley Works
Stanley Laboratory
1309 Corbin Avenue
New Britain, Connecticut 06053

cc: Bob Basch
Carol Witt



BOTTOM ELEV. 92.0
SETTLING & HOLDING POND
BOTTOM ELEV. 93.0
SLUDGE POND
SEE DETAIL A
TOP OF REDUCER 96.0
I.E. 93.5
I.E. 97.0
I.E. 96.0
SEE DETAIL C
SEE DETAIL B
FLOW THRU SETTLING POND
SLUDGE POND
SEE DETAIL A
BOTTOM ELEV. 93.0
TOP OF REDUCER 96.0
SEE DETAIL D
TOP OF ELBOW 94.5
SAMPLER CHAMBER SEE DTL. SHT. NO. 6
45° BEND
PROPOSED 8" D.I. POND INLET LINE
I.E. 93.0
EDGE OF EXISTING CONCRETE
PROPOSED CHEMICAL STOR. & FEED
8" PLUG VALVE & B.X.
CLEANOUT 8" CROSS
CEDAR RIVER

Soil Analyses
Stanley Tools Fowlerville

	Cu	Zn	Ni	Cr
1-A	29	65	22	25
1-B	11	44	15	10
1-C	21	30	17	14
1-D	16	23	18	17
2-A	84	102	44	52
2-B	49	45	20	17
2-C	27	37	33	16
2-D	25	25	19	14
3-A	24	22	33	7
3-B	16	29	14	6
3-C	11	19	19	10
3-D	10	18	12	8
4-A	116	110	93	128
4-B	54	54	13	27
4-C	25	29	75	13
4-D	14	15	15	6
5-A	8	23	8	5
5-B	26	41	20	17
5-C	14	15	15	6
5-D	11	18	10	8
6-A	780	163	10	192
6-B	12	32	17	12
6-C	44	38	23	21
6-D	21	12	13	11
7-A	84	108	53	62
7-B	23	38	17	11
7-C	71	54	43	18
7-D	50	27	15	14
8-A	37	44	27	33
8-B	80	70	32	36
8-C	19	28	37	12
8-D	11	17	15	10
9-A	88	13	8	10
9-B	31	10	7	5
9-C	31	12	10	5
9-D	16	17	7	8
10-A	35	62	17	20
10-B	24	22	7	8
10-C	15	20	7	8
10-D	18	17	10	6

NOTE: A = surface
B = 1' below surface
C = 2' below surface
D = 3' below surface

All sample results for Pb and Cd were less than detection limits.

Pb	<5.0
Cd	<1.5

All results expressed in mg/kg.

STATISTICAL LIMITS FOR CLEAN STANDARD

	1 - 3 Ft.	3 - 7 Ft.	6.5' - 10'	Across Boring
	Level 1	Level 2	Level 3	All
Ni	18.8	24.1	36.	24.
Cr	8.2	11.	15.7	12.1
Zn	16.3	388.	300.	347.
Cu	12.	15.	23.	18.
Cd	1.65	1.5	2.	1.7
As	24.	3.2	4.9	12.6
Pb	20.8	23.7	31.	26.

Level 1 - Sample 1 - Borings 1, 2, & 3

Level 2 - Sample 2 - Borings 1, 2, & 3

Level 3 - Sample 3 - Borings 1, 2, & 3

All - Represents all samples, all borings

SWANSON ENVIRONMENTAL INC.
Laboratory Services Division
3490 North 127th Street
Brookfield, Wisconsin 53005
telephone (414) 783-6111

ORIGINAL

REPORT NUMBER B 2532

ANALYTICAL REPORT

SHIP TO .Swanson Environmental, Inc.
24158 Haggerty Road
.Farmington Hills, MI 48024

.Atten: Steve Ridella

DATE August 20, 1985
PURCHASE ORDER NO.
SEI JOB NO. ME3168/L3800
DATE COLLECTED 7-31-85
DATE RECEIVED 8-05-85
PAGE 1 OF 5

Soil Samples (Stanley Tool)

Parameter	SEI ID / Sample ID	3800-1 BG1-1/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		4.5	4.8	4.8	4.8
Cadmium, mg/kg		1.9	1.6	1.8	1.5
Chromium, mg/kg		8	8	8	8
Copper, mg/kg		10	10	10	11
Lead, mg/kg		21	21	21	21
Nickel, mg/kg		21	20	19	20
Zinc, mg/kg		101.5	100.9	101.1	101.2
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

Parameter	SEI ID / Sample ID	3800-2 BG1-2/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		3.4	3.3	3.4	2.9
Cadmium, mg/kg		1.4	1.5	1.8	1.8
Chromium, mg/kg		11	10	10	9
Copper, mg/kg		13	14	13	14
Lead, mg/kg		23	23	23	23
Nickel, mg/kg		24	22	23	23
Zinc, mg/kg		177.9	179.5	178.9	178.9
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

cc: Cathy Clemson

Respectfully Submitted
Swanson Environmental, Inc.

James Kinscher
Chemist

Norman Crabb, PE
Director

FORM NO 02

SWANSON ENVIRONMENTAL INC.
Laboratory Services Division
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Attn: Steve Ridella

DATE August 20, 1985
PURCHASE ORDER NO.
SEI JOB NO. ME3168/L3800
DATE COLLECTED 7-31-85
DATE RECEIVED 8-05-85

Soil Samples (Stanley Tool)

Parameter	SEI ID / Sample ID	3800-3 BG1-3/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		5.3	5.4	5.4	5.2
Cadmium, mg/kg		2.5	2.2	2.5	2.5
Chromium, mg/kg		16	16	16	16
Copper, mg/kg		22	23	23	23
Lead, mg/kg		29	29	29	29
Nickel, mg/kg		38	38	37	38
Zinc, mg/kg		259.6	261.3	260.4	261.3
Cyanides, Total, mg/gk		<0.01	<0.01	<0.01	<0.01

Parameter	SEI ID / Sample ID	3800-4 BG1-4/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		2.1	2.2	2.2	2.1
Cadmium, mg/kg		1.6	1.4	1.1	1.3
Chromium, mg/kg		<4	<4	<4	<4
Copper, mg/kg		6	6	6	7
Lead, mg/kg		14	14	14	14
Nickel, mg/kg		12	10	11	11
Zinc, mg/kg		141.5	141.7	141.3	141.1
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

cc: Cathy Clemson

Respectfully Submitted
Swanson Environmental, Inc.

James Kinscher
Chemist

Norman Crabb, Ph.D.
Director

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SWANSON ENVIRONMENTAL INC.
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Swanson Environmental, Inc.
24158 Haggerty Road
Farmington Hills, MI 48024

Atten: Steve Ridella

DATE August 20, 1985
PURCHASE ORDER NO.
SEI JOB NO MP3168/L3800
DATE COLLECTED 7-31-85
DATE RECEIVED 8-05-85
PAGE 3 OF 5

Soil Samples (Stanley Tool)

Parameter	SEI ID / Sample ID	3800-5 BG2-1/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		30.1	29.7	30.6	27.0
Cadmium, mg/kg		1.6	1.3	1.7	1.8
Chromium, mg/kg		9	8	8	8
Copper, mg/kg		13	13	13	13
Lead, mg/kg		20	20	20	20
Nickel, mg/kg		18	18	18	18
Zinc, mg/kg		227.0	226.4	227.3	226.0
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

Parameter	SEI ID / Sample ID	3800-6 BG2-2/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		3.6	3.6	3.1	3.2
Cadmium, mg/kg		1.6	1.3	1.3	1.6
Chromium, mg/kg		12	12	12	12
Copper, mg/kg		16	16	16	17
Lead, mg/kg		25	25	25	25
Nickel, mg/kg		26	26	26	26
Zinc, mg/kg		113.5	114.7	115.0	115.2
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

cc: Cathy Clemson

Respectfully Submitted
Swanson Environmental, Inc.

James Kinscher
Chemist

Norman Crabb, P...
Director

FORM NO. 02

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DATE RECEIVED 8-05-85
PAGE 4 OF 5

Soil Samples (Stanley Tool)

Parameter	SEI ID / Sample ID	3800-7 BG2-3/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		4.1	4.2	4.8	4.5
Cadmium, mg/kg		1.4	1.6	1.2	1.9
Chromium, mg/kg		14	14	15	14
Copper, mg/kg		23	22	23	23
Lead, mg/kg		32	32	24	32
Nickel, mg/kg		33	33	33	33
Zinc, mg/kg		301.0	301.0	302.2	302.0
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

Parameter	SEI ID / Sample ID	3800-8 BG3-1/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		19.6	21.7	22.4	21.4
Cadmium, mg/kg		1.1	1.2	0.8	0.6
Chromium, mg/kg		8	8	8	8
Copper, mg/kg		11	11	11	10
Lead, mg/kg		21	21	21	21
Nickel, mg/kg		15	15	16	15
Zinc, mg/kg		34.1	34.3	34.1	34.2
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

cc: Cathy Clemson

Respectfully Submitted
Swanson Environmental, Inc.

James Kinscher
Chemist

Norman Crabb, Ph.D.
Director

FORM NO. 02

SWANSON ENVIRONMENTAL INC.
Laboratory Services Division
3490 North 127th Street
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.Farmington Hills, MI 48024

.Atten: Steve Ridella

DATE August 20, 1985
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DATE COLLECTED 7-31-85
DATE RECEIVED 8-05-85
PAGE 5 OF 5

Soil Samples (Stanley Tool)

Parameter	SEI ID / Sample ID	3800-9 BG3-2/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		1.2	1.3	1.4	1.1
Cadmium, mg/kg		1.0	1.0	0.8	1.0
Chromium, mg/kg		10	9	9	9
Copper, mg/kg		12	13	13	14
Lead, mg/kg		20	20	20	20
Nickel, mg/kg		19	18	18	19
Zinc, mg/kg		556	560	554	558
Cyanides, Total, mg/kg	1	<0.01	<0.01	<0.01	<0.01

Parameter	SEI ID / Sample ID	3800-10 BG3-3/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		4.4	4.5	4.6	4.7
Cadmium, mg/kg		0.8	1.2	1.2	1.4
Chromium, mg/kg		17	16	17	17
Copper, mg/kg		23	22	22	24
Lead, mg/kg		31	31	31	31
Nickel, mg/kg		35	34	36	35
Zinc, mg/kg		602	605	600	603
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

cc: Cathy Clemson

Respectfully Submitted
Swanson Environmental, Inc.

James Kinscher
Chemist

Norman Crabb, Ph.D.
Director

FORM NO. 02

SWANSON ENVIRONMENTAL INC.
Laboratory Services Division
3490 North 127th Street
Brookfield, Wisconsin 53005
telephone (414) 783-6111

ORIGINAL

REPORT NUMBER S 2532

ANALYTICAL REPORT

SHIP TO
- Swanson Environmental, Inc.
  24158 Haggerty Road
- Farmington Hills, MI 48024
- Attn: Steve Ridella

DATE August 26, 1985
PURCHASE ORDER NO.
SEI JOB NO. ME3168/L3800
DATE COLLECTED 7-31-85
DATE RECEIVED 8-05-85
PAGE 1 OF 2

Soil Samples (Stanley Tool - Duplicate)

Parameter	SEI ID / Sample ID	3800-1 BG1-1/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		6.8	7.6	7.3	7.2
Cadmium, mg/kg		1.2	1.2	1.2	1.2
Chromium, mg/kg		10	10	10	10
Copper, mg/kg		11	11	11	11
Lead, mg/kg		12	12	12	12
Nickel, mg/kg		14	14	14	14
Zinc, mg/kg		157	158	158	157
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

Parameter	SEI ID / Sample ID	3800-3 BG1-3/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		3.9	3.8	3.4	3.6
Cadmium, mg/kg		2.6	2.4	2.4	2.4
Chromium, mg/kg		18	18	18	18
Copper, mg/kg		22	22	22	21
Lead, mg/kg		28	22	28	28
Nickel, mg/kg		36	37	36	36
Zinc, mg/kg		242	242	242	243
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

cc: Cathy Clemson

Respectfully Submitted
Swanson Environmental, Inc.

James Kinscher
Chemist

Norman Crabb, Ph.D.
Director

FORM NO 02

SWANSON ENVIRONMENTAL INC.
Laboratory Services Division
3490 North 127th Street
Brookfield, Wisconsin 53005
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SHIP TO
Swanson Environmental, Inc.
24158 Haggarty Road
Farmington Hills, MI 48024

Atten: Steve Ridella

DATE August 26, 1985
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DATE COLLECTED 7-31-85
DATE RECEIVED 8-05-85
PAGE 2 OF 2

Soil Samples (Stanley Tool - Duplicate)

Parameter	SEI ID Sample ID	3800-4 BG1-4/1st Run	2nd Run	3rd Run	4th Run
Arsenic, mg/kg		3.2	3.3	3.2	3.3
Cadmium, mg/kg		1.4	1.4	1.5	1.3
Chromium, mg/kg		4	4	4	4
Copper, mg/kg		5	5	6	5
Lead, mg/kg		14	14	14	14
Nickel, mg/kg		9	9	9	8
Zinc, mg/kg		152	151	151	152
Cyanides, Total, mg/kg		<0.01	<0.01	<0.01	<0.01

cc: Cathy Clemson

Respectfully Submitted
Swanson Environmental, Inc.

James Kinscher
Chemist

Norman Crabb, Ph.D.
Director

FORM NO. 02

Professional Service Industries, Inc.
Michigan Testing Engineers Division

LOG OF BORING NO. BG 1

PROJECT Soils Exploration

JOB NO 406-55078

LOCATION Stanley Company

SURFACE ELEV _____ DATE 7-31-85

Fowlerville, Michigan

Sample & Type	Depth	Legend	SOIL DESCRIPTIONS	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength Psf
1			Sandy TOPSOIL, black, moist					
	1'0"		S.T. no 1 Push from 6" to 6'6" R=?					
2			Silty CLAY, brown, moist					
3	3'0"							
4			Silty SAND, brown, moist					
5	5'0"		S.T. no 2 Push from 3'6" to 6'6" R=3'					
6			Silty CLAY, brown and gray					
7			S.T. no 3 Push from 6'6" to 9'6" R=3'					
8								
9	9'0"							
10	9'6"		Sandy, silty CLAY, gray					
			S.T. no 4 Push from 9'6" to 12' R=2'6"					
11			Medium SAND, gray, wet					
12	12'0"							
13			END OF BORING					
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

TYPE OF SAMPLE
D DISTURBED
U.I. UNDIST. LINER
S.T. SHELBY TUBE
S.S. SPLIT SPOON

REMARKS:

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	9	FT	6
G.W. ENCOUNTERED AT		FT	
G.W. AFTER COMPLETION	2	FT	6

...Geotechnical Service Trustees, Inc.
Michigan Testing Engineers Division

LOG OF BORE 1 BG NO. BG 2

PROJECT Soils Exploration

JOB NO 406-55078

LOCATION Stanley Company

SURFACE ELEV _____ DATE 7-31-85 Fowlerville, Michigan

Sample & Type	Depth	Legend	SOIL DESCRIPTIONS	Penetration Blows Per 6"	Moisture %	Natural Wt. PCF	Dry Den. Wt. PCF	Unc. Comp. Strength PSF
		6"	Sandy TOPSOIL, black, moist					
	1		Sandy silty CLAY, brown, moist					
	2		S.T. no 1 Push from 6" to 3'6" R=2'					
	3							
	4		S.T. no 2 Push from 3'6" to 6'6" R=3'					
	5	5'0"						
	6		Sandy silty CLAY, gray					
	7		S.T. no 3 Push from 6'6" to 9' R=2'6"					
	8	8'6"						
	9	9'0"	Medium SAND, gray, wet					
	10		END OF BORING					
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							

TYPE OF SAMPLE
D DISTURBED
U UNDIST LINER
ST SHELBY TUBE
SS SPLIT SPOON

REMARKS:

CAVING WATER OBSERVATIONS
GW ENCOUNTERED AT 8 FT 6
GW ENCOUNTERED AT FT

Michigan Testing Engineering Division

LOG OF BORE HOLE NO. BG 3

PROJECT Soils Exploration

JOB NO A06-55028

LOCATION Stanley Company

SURFACE ELEV _____ DATE 7-31-85

Fowlerville, Michigan

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows Per 6"	Moisture %	Natural Wt. PCF	Dry Den. Wt. PCF	Unc. Comp. Strength PSF
		9"	Sandy black TOPSOIL					
	1							
	2		Sandy CLAY, brown, moist					
	3		S.T. no 1 Push from 1' to 4' R=3'					
	4							
	5		S.T. no 2 Push from 4' to 7' R=3'					
		5'0"						
	6		Sandy CLAY, gray, moist					
	7							
	8		S.T. no 3 Push from 7' to 10' R=3'					
	9	9'0"						
	10	10'0"	SILT and SAND, gray, wet					
	11		END OF BORING					
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							

TYPE OF SAMPLE
D DISTURBED
UI UNDIST LINER
ST SHELBY TUBE
SS SPLIT SPOON
RC ROCK CORE

REMARKS:

GROUND WATER OBSERVATIONS

G W ENCOUNTERED AT 9 FT
G W ENCOUNTERED AT FT
G W AFTER COMPLETION FT

Received 6/12/86

ANALYTICAL REPORT

ENVIRONMENTAL RESEARCH GROUP, INC.

Project: A4234
Report Date: 05-12-86

117 N. FIRST
ANN ARBOR, MICHIGAN 48104 (313) 662-3104

Client P.O.
Report: 18543

Samples Recvd: 04-18-86
Refer Questions To:
ROBYN WOOLEY

Client:
STANLEY TOOLS DIVISION
425 FRANK STREET
FOWLERVILLE, MI 48836
Attention: MIKE STOCK

Approved: Barbara Hansen

Residual Samples Will Be Held
TWO WEEKS

Client I.D.: OW2
ERG Sample No.: 04/150424
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	ND (0.01)	mg/L
CHROMIUM, DISSOLVED	<0.02	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	<0.01	mg/L
NICKEL, DISSOLVED	<0.05	mg/L
SPECIFIC CONDUCTANCE	900	umho/cm
ZINC, DISSOLVED	1.4	mg/L
pH	7.4	S.U.

Client I.D.: OW5S
ERG Sample No.: 04/150425
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	ND (0.01)	mg/L
CHROMIUM, DISSOLVED	0.02	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	<0.01	mg/L
NICKEL, DISSOLVED	<0.05	mg/L
SPECIFIC CONDUCTANCE	1000	umho/cm
ZINC, DISSOLVED	0.10	mg/L
pH	8.4	S.U.

Client I.D.: OW9S
ERG Sample No.: 04/150426
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	ND (0.01)	mg/L
CHROMIUM, DISSOLVED	ND (0.02)	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	0.03	mg/L
NICKEL, DISSOLVED	ND (0.05)	mg/L
SPECIFIC CONDUCTANCE	2650	umho/cm

See last page for explanation of symbols.

ANALYTICAL REPORT

ENVIRONMENTAL RESEARCH GROUP, INC.

Project: A4234
Report Date: 05-12-86

Client I.D.: OW9S
ERG Sample No.: 04/150426
Matrix: NATURAL WATER

Parameter	Result	Units
ZINC, DISSOLVED	0.09	mg/L
pH	9.2	S.U.

Client I.D.: OW11S
ERG Sample No.: 04/150427
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	ND (0.01)	mg/L
CHROMIUM, DISSOLVED	0.02	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	0.01	mg/L
NICKEL, DISSOLVED	0.13	mg/L
SPECIFIC CONDUCTANCE	2200	umho/cm
ZINC, DISSOLVED	8.8	mg/L
pH	6.8	S.U.

Client I.D.: OW12S
ERG Sample No.: 04/150428
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	ND (0.01)	mg/L
CHROMIUM, DISSOLVED	0.02	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	0.01	mg/L
NICKEL, DISSOLVED	<0.05	mg/L
SPECIFIC CONDUCTANCE	2200	umho/cm
ZINC, DISSOLVED	0.36	mg/L
pH	7.0	S.U.

Client I.D.: OW10S
ERG Sample No.: 04/150429
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	<0.01	mg/L
CHROMIUM, DISSOLVED	<0.02	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	<0.01	mg/L
NICKEL, DISSOLVED	<0.05	mg/L
SPECIFIC CONDUCTANCE	2400	umho/cm
ZINC, DISSOLVED	0.19	mg/L
pH	8.3	S.U.

See last page for explanation of symbols.

ANALYTICAL REPORT

ENVIRONMENTAL RESEARCH GROUP, INC.

Project: A4234
Report Date: 05-12-86

Client I.D.: UPSTREAM
ERG Sample No.: 04/150430
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	ND (0.01)	mg/L
CHROMIUM, DISSOLVED	0.02	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	<0.01	mg/L
NICKEL, DISSOLVED	ND (0.05)	mg/L
SPECIFIC CONDUCTANCE	600	umho/cm
ZINC, DISSOLVED	0.03	mg/L
pH	7.6	S.U.

Client I.D.: DOWNSTREAM
ERG Sample No.: 04/150431
Matrix: NATURAL WATER

Parameter	Result	Units
CADMIUM, DISSOLVED	<0.01	mg/L
CHROMIUM, DISSOLVED	<0.02	mg/L
COPPER, DISSOLVED	<0.02	mg/L
CYANIDE, TOTAL	<0.01	mg/L
NICKEL, DISSOLVED	<0.05	mg/L
SPECIFIC CONDUCTANCE	600	umho/cm
ZINC, DISSOLVED	0.02	mg/L
pH	7.7	S.U.

SD-Sample damaged
FR-See field report for result
SR-See attached report
NA-Result not applicable to test

ND-Nondetected, Detection limit in ()
<-Positive result at an unquantifiable concentration below indicated level

Thank you for your business.

APPENDIX C

APPENDIX C

KECK BORING LOGS

ECCA CONSULTING SERVICES, INC.
"Ground Water Specialists"
4903 Dawn Avenue • East Lansing, Michigan 48823 • (517) 332-8623

SOIL BORING DATA

JOB NUMBER 0746 DATE as shown

OWNER Hoover Universal Corp., Die Casting Division

LOCATION: State Michigan County Livingston Twp. Handy

Section 10 T. 3 N. ; R. 3 E.

MINERAL WELL PERMIT NUMBER: 367-782-147

AUGER: 4-inch ☐ 6-inch ☒ Profile ☑ Split-spoon ☐

PLUGGING METHOD:
- ☐ Natural Materials
- ☒ Bentonite
- ☐ Cement

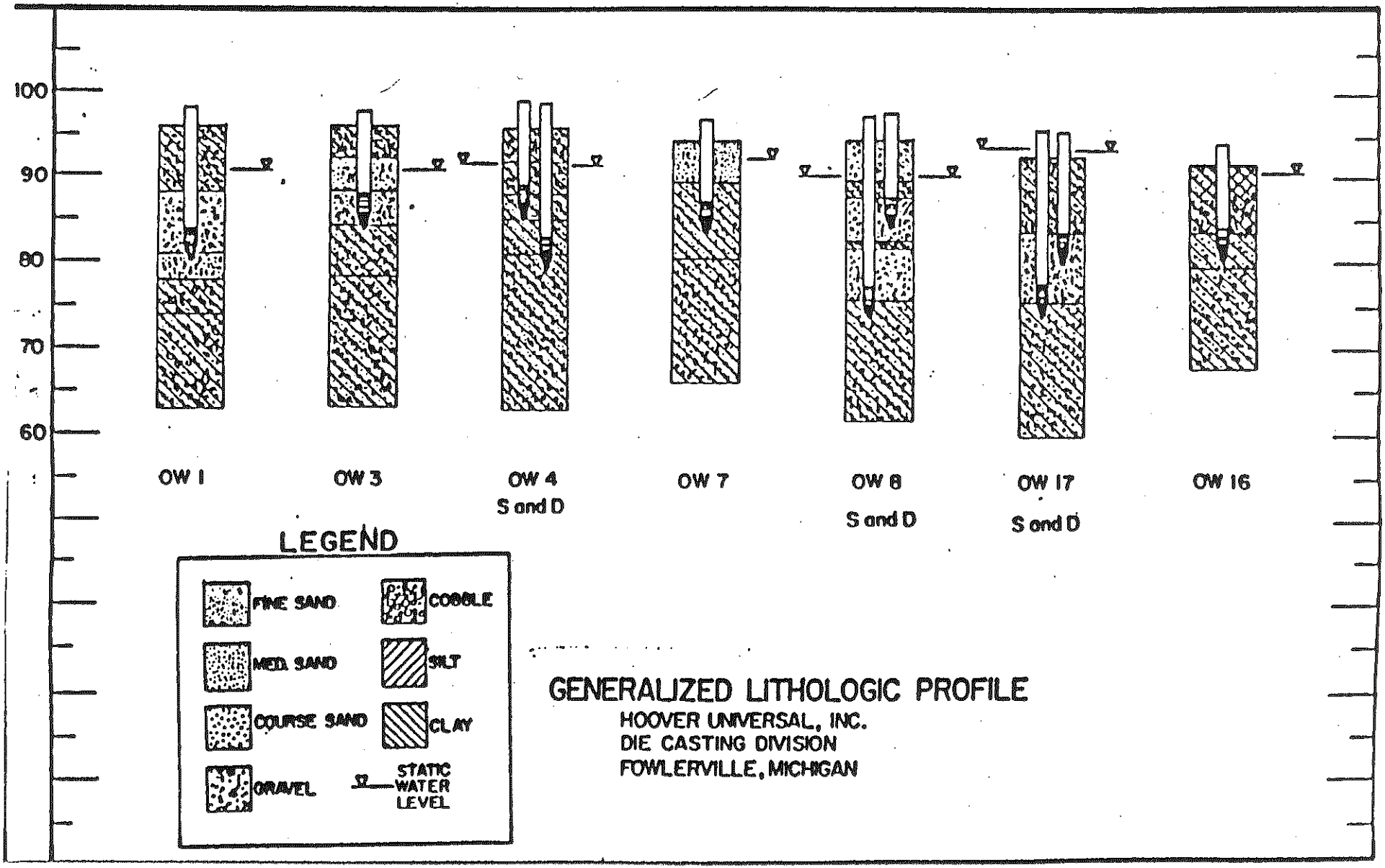
Geologist M. Pickett Field Ass't T. VanDomelen

BORING NUMBER B-1A TOTAL DEPTH 22' S.W.L.(BGL)

11/16/78

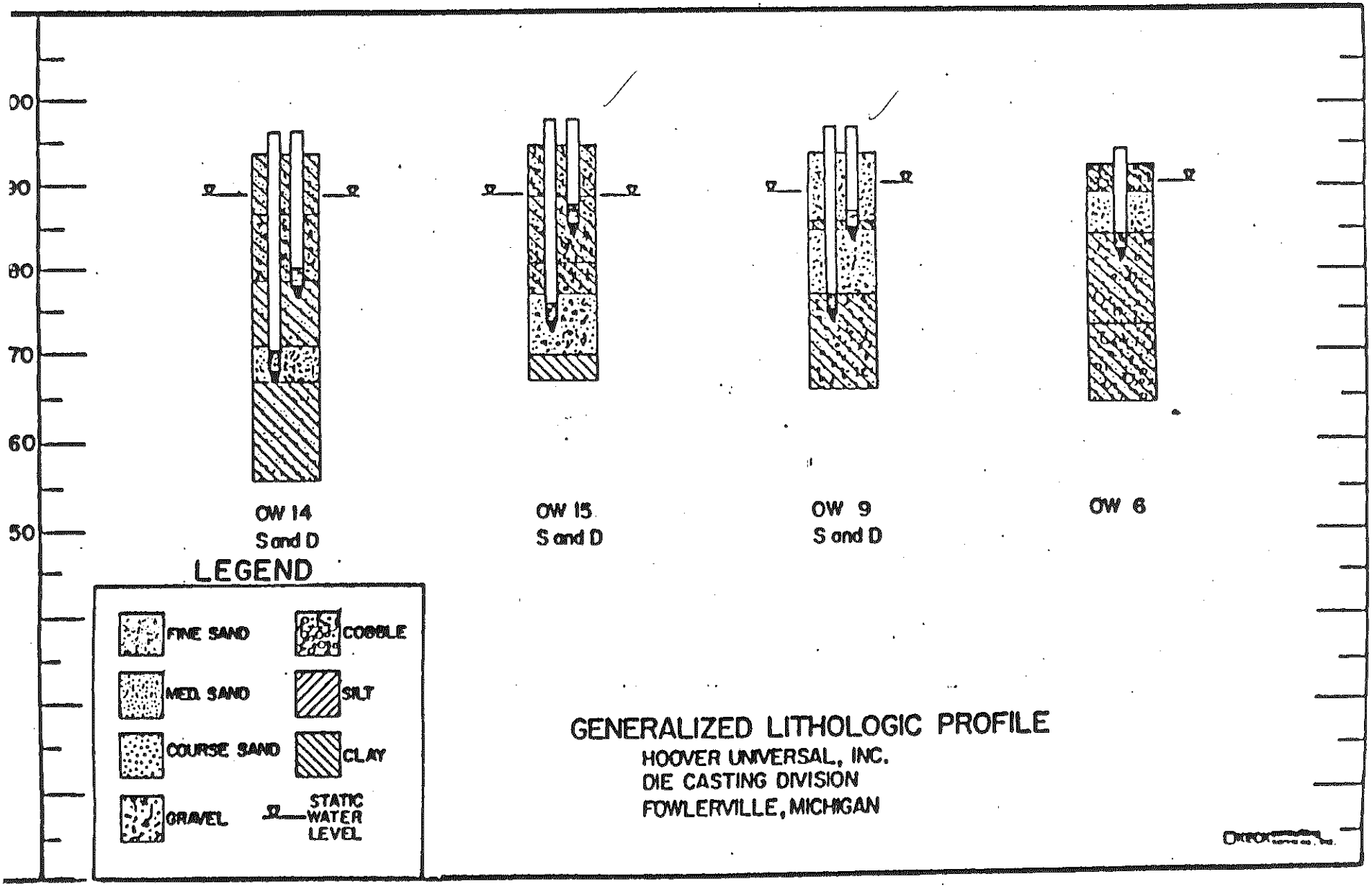
Sample Number	From to Feet	Lithologic Description
1	0- 3	CLAY: w/sand lenses & gravel, mottled brown
2	3- 8	CLAY: gray-brown, sandy w/some gravel,
		sat. @ 8'
3	8-13	SAND: unsorted (mostly crse.) w/some fn.
		gravel
4	13-15	SAND: unsorted (mostly crse.) w/some fn.
		gravel & silt & clay
5	15-18	CLAY: med. hard, gray, sandy w/stones
6	18-22	CLAY: tight, sandy w/some fn. gravel, gray
	22	REFUSAL on rock @ 22'
		moved over 2' west
		BENTONITE PLUG 8-10'

Piezometer: ☐ Screen_____ Pipe_____ Total Depth (BGL)_____



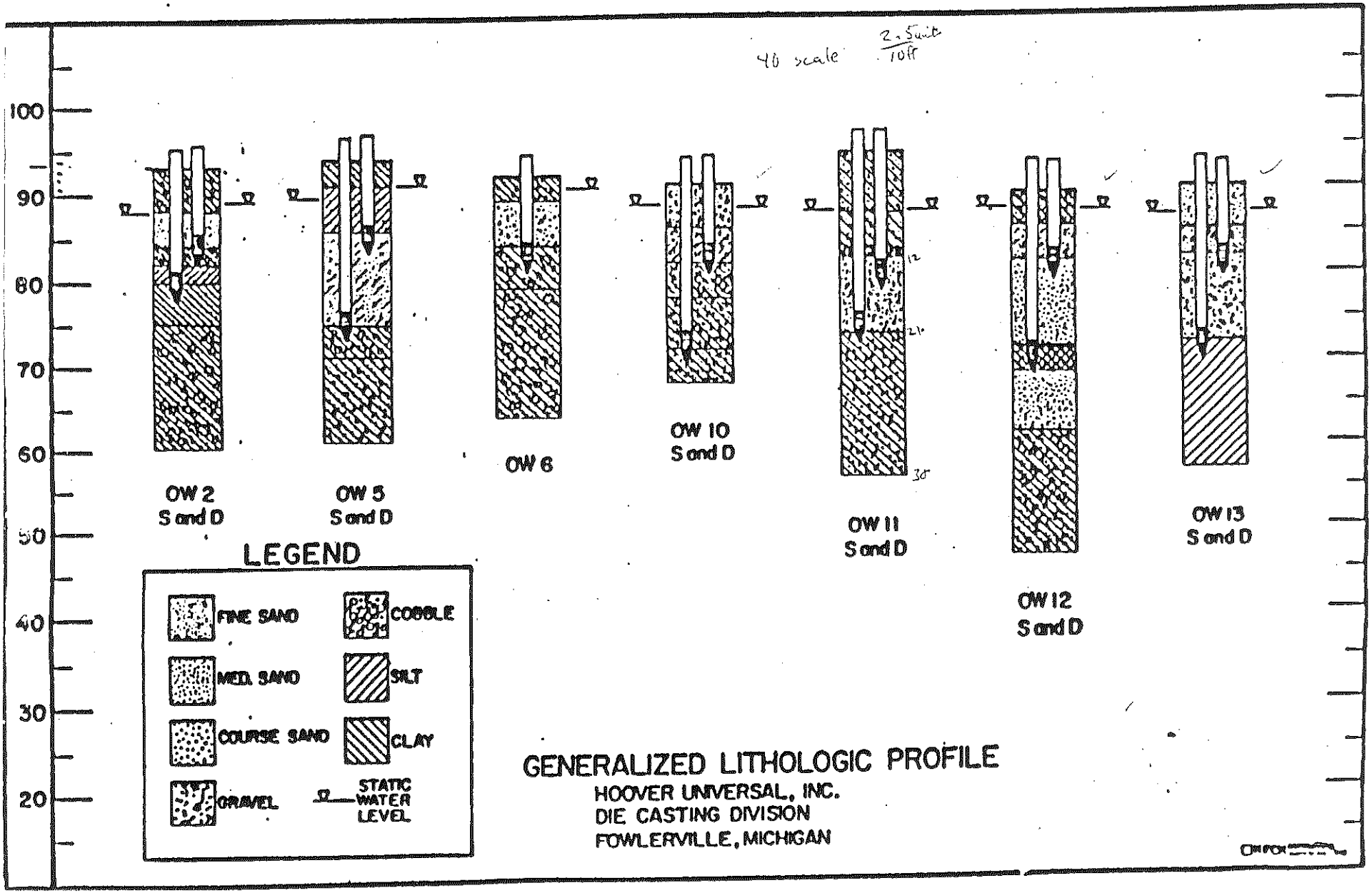
GENERALIZED LITHOLOGIC PROFILE

HOOVER UNIVERSAL, INC.
DIE CASTING DIVISION
FOWLERVILLE, MICHIGAN



GENERALIZED LITHOLOGIC PROFILE

HOOVER UNIVERSAL, INC.
DIE CASTING DIVISION
FOWLERVILLE, MICHIGAN


40 scale
2.5 units / 10ft
100
90
80
70
60
50
40
30
20
OW 2
S and D
OW 5
S and D
OW 6
OW 10
S and D
OW 11
S and D
OW 12
S and D
OW 13
S and D
LEGEND
FINE SAND
MED. SAND
COURSE SAND
GRAVEL
COBBLE
SILT
CLAY
STATIC WATER LEVEL
GENERALIZED LITHOLOGIC PROFILE
HOOVER UNIVERSAL, INC.
DIE CASTING DIVISION
FOWLERVILLE, MICHIGAN

APPENDIX D

APPENDIX D

CHRONOLOGY OF GROUNDWATER MONITORING HISTORY

APPENDIX D

CHRONOLOGY OF GROUND WATER MONITORING STANLEY TOOLS PLANT FOWLERVILLE, MICHIGAN

1979: Keck Consultants conducted a hydrogeologic investigation for Hoover International, Inc. Keck installed 17 monitor wells, each constructed of 2-inch galvanized steel.

1979-1981: Ground water was sampled for cyanide, copper, nickel, and zinc as suggested by the Michigan Department of Natural Resources (MDNR).

January 1980: Stanley acquires Hoover property.

November 1981: Stanley begins interim status ground water monitoring program with OW-7 as the upgradient well and OW-5, OW-10, and OW-12 as the downgradient wells.

May 1982-January 1983: First year of interim monitoring sampling for primary drinking water parameters, ground water quality parameters, and indicator parameters.

May 1983: Began semiannual sampling. Statistically tested the indicator parameters and failed the Student's t-test.

August 1983. Keck prepared a ground water quality assessment plan for Stanley that added three new downgradient wells (OW-2, OW-9, and OW-11) and two river sampling locations to the sampling network.

October 1983: First round of assessment monitoring.

November 1983: Well OW-2 replaced by new well OW-2.

January 1984: Second round of assessment monitoring.

June 1984: Keck submitted a revised assessment monitoring plan that removed the indicator parameters and added copper, nickel, zinc, chromium (total), cyanide (total), and cadmium.

July 1984: First round of revised assessment monitoring.

October 1984: Second round of revised assessment monitoring.

January 1985: Third round of revised assessment monitoring.

February 1985: Environ Corporation submitted Ground Water Assessment Report.

April 1985: Quarterly sampling by Dames & Moore.

July 1985: Quarterly sampling by Dames & Moore.

October 1985: Quarterly sampling by Dames & Moore.

January 1986: Quarterly sampling by Dames & Moore. Well OW-7 was destroyed by excavation of the surface impoundment.

April 1986: Quarterly sampling by Dames & Moore.

July 1986: Quarterly sampling by Dames & Moore. New well OW-7 installed with PVC materials.

October 1986: Quarterly sampling by Dames & Moore.

January 1987: Quarterly sampling by Dames & Moore. Analyzed for volatile organic compounds and additional cations and anions at the request of MDNR.

April 1987: Quarterly sampling by Dames & Moore.

July 1987: Quarterly sampling by Dames & Moore.

October 1987: Quarterly sampling by Dames & Moore.

January 1988: Quarterly sampling by Dames & Moore.

March 1988: Quarterly sampling by Dames & Moore.

July 1988: Quarterly sampling by Dames & Moore.

October 1988: Quarterly Sampling by Dames & Moore.

February 1989: Quarterly Sampling by Dames & Moore.

June 1989: Quarterly Sampling by Dames & Moore. Resurveyed well OW-2.

September 1989: Quarterly Sampling by Dames & Moore. Resurveyed well OW-7.

January 1990: Quarterly Sampling by Dames & Moore.

April 1990: Quarterly Sampling by Dames & Moore.

July 1990: Quarterly Sampling by Dames & Moore.

December 1990: Quarterly Sampling by Dames & Moore. Survey wells MW-BCK, MW-A1 through MW-A4.

January 1991: Quarterly Sampling by Dames & Moore. Split samples with MDNR.

April 1991: RFI Strategy Sampling by Dames & Moore. Perform aquifer response tests and survey all wells installed by Dames & Moore.

July 1991: Quarterly sampling by Dames & Moore.

October 1991: Quarterly sampling by Dames & Moore.

January 1992: Quarterly sampling by Dames & Moore.

April 1992: Quarterly sampling by Dames & Moore.

July 1992: Quarterly sampling by Dames & Moore.

October 1992: Quarterly sampling by Dames & Moore.

January 1993: Quarterly sampling by Dames & Moore.

April 1993: Quarterly sampling by Dames & Moore.

July 1993: Quarterly sampling by Dames & Moore. Resurvey of monitoring wells MW-0W9S and MW-J2, and staff gauges at Unit A Pond and Red Cedar River.

October 1993: Quarterly sampling by Dames & Moore.

January 1994: Quarterly sampling by Dames & Moore. Phase II RFI well installation.

February 1994: Phase II RFI strategy sampling by Dames & Moore. Perform aquifer response tests and survey all wells installed by Dames & Moore during Phase II RFI.

April 1994: Quarterly sampling by Dames & Moore.

APPENDIX E

TECHNICAL MEMORANDA

TECHNICAL MEMORANDUM NO. 1
GROUND WATER
MONITORING WELL INSTALLATION

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-026-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	Anne Lundahl	**Date:**	December 13, 1990

SUMMARY OF TASKS PERFORMED

Soil borings and monitoring well installation activities for the subsurface investigation of the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was conducted by Dames & Moore between October 22 and November 26, 1990. During the course of field activities, the health and safety guidelines were followed, as specified in *Task 7: Health and Safety Plan.* The Dames & Moore site safety officer monitored activities of Dames & Moore staff and subcontractors.

A total of 22, 2-inch-diameter stainless-steel monitoring wells were installed during the Phase I field activities (14 shallow and 8 deep wells) (see Figure 3-4 for locations). Boring logs, including well construction details, are presented in Appendix E. Borings were drilled downgradient from Units A, B, C, E, F, G, and J. The monitoring strategy was to install at least one shallow well and, if a deep unconsolidated aquifer was encountered, one deep well downgradient of each unit. The shallow wells were installed in the upper facies. The deeper wells were installed in the lower facies and on bedrock. Deep and shallow background wells were also installed.

The shallow wells were installed to depths ranging from 15 to 18.5 feet in the upper facies. The deep wells were installed to depths ranging from 33 to 45 feet. A summary of well construction details and water levels are presented in Table 3-12.

Soil sampling was conducted during boring operations. A total of 36 samples were sent to the Dames & Moore Soils Laboratory in Salt Lake City, Utah. The soils

were analyzed for physical properties to aid in subsurface characterization (see Table 4-3).

All drilling and well installation was performed by Professional Services Industries, Inc. (PSI), under the supervision of Dames & Moore.

PREDRILLING ACTIVITIES

MONITORING WELL LOCATIONS

Monitoring well locations were proposed in the Phase I RFI strategy and approved by the United States Environmental Protection Agency (U.S. EPA) prior to the start of drilling. The proposed locations were then identified onsite by using stakes and flags.

SITE PREPARATION

Due to the presence of dense woodlands, land clearing was required between Unit F and the Red Cedar River to allow the drill rig access to downgradient locations (October 19, 1990). A bulldozer was used to construct access roads into Unit F. Land clearing was performed in Unit G and the installation of four wooden mats (4 feet by 20 feet) surrounded by stone were used to provide sufficient support for the drill rig at MW-G2 and MW-G3 locations (October 25, 1990). The road development and pad installation were conducted by Copeland Construction, Fowlerville, Michigan. Trenches were also excavated by Copeland Construction near Units A, F, G, and the background well to allow space for placement of cuttings from drilling operations. Cuttings from Units B, C, and the decontamination platform were placed in a trench on the west side of Unit C. All work was conducted under the supervision of Dames & Moore.

DRILLING AND SOIL SAMPLING

DRILLING EQUIPMENT

A Central Mine Equipment (CME)-55, all-terrain vehicle drill rig was used to drill all borings. The rig utilized 10-1/4-inch-inner diameter (ID) hollow-stem augers (HSA)

to install surface casings for the deep wells, and 6-1/4-inch-ID HSA for all other borings drilled to install surface casings.

SAMPLING PROCEDURES

The standard penetration test (SPT) (ASTM D-1586-84) method with a 2-foot drive was used to sample borings. The method consists of driving a 2-inch-outer diameter (OD), 24-inch-long split spoon a total of 6-inch increments using a 140-pound hammer, which was allowed to fall 30 inches. Subsurface soil sampling was performed at less than 5-foot intervals in each stratum encountered. At locations where both a deep and shallow well were installed, the deep boring was drilled first and sampled. The samples were analyzed for the following soil properties: porosity, particle size, moisture content, Atterberg limits (for cohesives only), and cation exchange capacity (for cohesives only). Undisturbed liner samples were collected from the till layer of each boring, when encountered, and retained for analysis for constant-head permeability and density, in addition to the parameters listed above. The methods used to determine soil properties are indicated in Table 14 of the *Task 3: RFI Strategy*.

Soil samples were not collected for the following borings: MW-A3, MW-B1, MW-C1, MW-E1, MW-F3, MW-G3, and MW-J1. Samples representative of these locations were collected from the adjacent deep monitoring wells.

Upon collection, each soil sample was described and recorded on a boring log by a Dames & Moore geologist, and evaluated in the field for absence or presence of impact. Criteria used for this evaluation included discoloration, chemical odor, presence of volatile organic compounds (VOCs) measured by using an 11.7 eV photoionization detector (HNu), and the presence of hydrogen cyanide by using draeger tubes with a hand-held pump. Sample descriptions were documented on standard Dames & Moore field forms. A portion of each sample was placed in glass containers for laboratory analysis. Brass rings were inserted into the split spoon when an undisturbed sample was required. The brass rings were then gently removed into two 6-inch brass liners to provide an adequate undisturbed sample for analysis of constant-head permeability and density, as required by the geotechnical laboratory. Clean latex gloves were worn at all times during sample handling.

MONITORING WELL INSTALLATION

Monitoring wells were installed to depths ranging from 16 to 45 feet. At all deep well locations, 10-1/4-ID HSA were used to drill to the till layer. Augers where then withdrawn from the hole while a 4:1 cement/bentonite grout was delivered under pressure into the boring. A 13-inch-diameter steel casing was then inserted into the borehole and driven to depth by rig hydraulics, when necessary. The grout inside the casing was then displaced with water. Thus, it was not necessary to drill through grout during well installation. The water was then pumped out of the boring and a PVC cap placed on the top of the casing. The grouted casing was left undisturbed for a minimum of 48 hours prior to resuming drilling activities.

After surface casings were installed, drilling activities continued. In the case of well clusters, the deeper well was completed first, followed by the shallow well.

Upon drilling to a specified depth, a 2-inch-diameter, 5-foot-long, stainless steel screen and bottom plug were inserted through the top of the augers (shallow wells were constructed with 10-foot screens and were installed across the zone of water table fluctuation). The well screens are continuously slotted with 0.010-inch openings. As the screen was lowered into the boring, 2-inch-diameter, Type 304 stainless-steel riser-piping with flush-threaded couplings was attached to the screen with Teflon™ tape to allow a minimum of 2 feet above-ground surface. A silica sand (Parry Number 4) pack was placed around the screen to a depth of at least 2 feet above the top of the screen. The augers were incrementally withdrawn while the sand was added to allow the pack to fall into place around the screen. An approximately 3-foot thick bentonite seal was then placed above the sand pack by dropping bentonite pellets into the annulus between the well and the inside of the auger while the augers were gradually removed.

For deep well installation, the remaining augers were removed as a cement/bentonite grout was pumped down the hole. The grout mixture placed above the bentonite seal was a Type I Portland cement mixed in the proportion of 6 gallons of water per one bag of cement. Between 2 to 4 pounds of bentonite powder were added to the mix for each bag of cement. The grout was mixed by circulating the mixture until a desired consistency was obtained. A 1-inch tremie pipe was inserted in the annular space adjacent to the 2-inch riser and extended to the bottom of the annulus. A grout hose was

then connected to the tremie pipe, and grout injected under pressure to displace water from above the bentonite seal. This process was continued until grout appeared at the top of the bore hole. For shallow well installation, at least 2 feet of annulus were left above the bentonite seal to allow for cementing and pad installation.

Depths to the well construction features (top of sand pack, bentonite, etc.) were measured with a weighted fiberglass-coated cloth tape and recorded by the field geologist. A 4-inch-diameter protective steel casing with locking lid was installed and set in at least 3 feet of concrete. A square concrete pad (6 feet by 6 feet) was then constructed around the well casings. A bobcat front-end loader, and hand-digging where necessary, were utilized to excavate for pad installation. Wooden frames were placed around the excavation prior to pouring the cement. Locks were placed on the wells immediately after installation.

WELL DEVELOPMENT

All wells were developed on November 19 and 20, 1990, by air surging and air-lift pumping using filtered, compressed air. The volume of water removed from each well was recorded during development. Development continued until fine sediment was not visible in the water sample. The amount of water recovered during development ranged from 36 to 225 gallons. A minimum of five well volumes was removed from each well during development. During purging the purged water was poured on the ground as specified in the Phase I Workplan (Task 3), Section 3.1.4. HNu PID measurements were collected from the headspace of a 5-gallon bucket filled with development water. Measurements were recorded from the onset of pumping until the completion of pumping. A summary of well development data is presented in Table 3-13.

DECONTAMINATION PROCEDURES

All drilling and sampling equipment was steam-cleaned prior to beginning a new boring. Split spoons were also decontaminated between sampling intervals by steam cleaning. Non-disposable, personal protective equipment (PPE) was also steam cleaned at the end of each day prior to leaving the decontamination zone. The PPE remained onsite during the course of field activities.

RFI PHASE II

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

SUMMARY OF TASKS PERFORMED

Soil boring and monitoring well installation activities for the subsurface investigation of the Phase II RFI were conducted by Dames & Moore between January 10 and February 10, 1994. During the course of field activities, the health and safety guidelines were followed, as specified in *Task 7: Health and Safety Plan*. The Dames & Moore site safety officer monitored activities of Dames & Moore staff and subcontractors.

Thirteen 2-inch-diameter stainless-steel monitoring wells were installed (nine shallow and four intermediate wells) (see Figure 3-5 for locations). Boring logs, including well construction details, are presented in Appendix E.

The shallow ground water monitoring wells were drilled downgradient of Units C, E, J, K, and L, and adjacent to the deep background well. Three shallow wells were drilled offsite, west of the Red Cedar River. The shallow wells were installed to depths ranging from 10 to 14 feet in the water-bearing stratum above the first confining layer. Six of nine shallow monitoring wells were installed with the screened interval intersecting the ground water table.

The intermediate wells were located downgradient of units B, F, J, and adjacent to the deep background well. The intermediate wells were installed to depths ranging from 28 to 30 feet.

All drilling and well installation was performed by Stearns Drilling of Dutton, Michigan, under the supervision of Dames & Moore. A summary of well construction details and water levels is presented in Table 3-12.

PREDRILLING ACTIVITIES

MONITORING WELL LOCATIONS

Monitoring well locations were proposed in the Phase II RFI work plan and approved by the U.S. EPA prior to the start of drilling. The proposed locations were then identified onsite by using stakes and flags.

SITE PREPARATION

Sections of dense woodlands, west of the Red Cedar River, were cleared by the drill rig as necessary to gain access to the offsite well locations. All work was conducted under the supervision of Dames & Moore.

DRILLING AND SOIL SAMPLING

DRILLING EQUIPMENT

A CME-850, all-terrain vehicle drill rig was used to drill all borings. The rig utilized 10-1/4-ID HSA to install surface casings for the intermediate wells, and 4-1/4-inch-ID HSA for all other borings drilled to install well casings.

SAMPLING PROCEDURES

The standard penetration test (SPT) (ASTM D-1586-84) method with a 2-foot drive was used to sample borings. The method consists of driving a 2-inch-outer diameter (OD), 24-inch-long split spoon a total of 6-inch increments using a 140-pound hammer, which was allowed to fall 30 inches. Soil sampling was performed at less than 5-foot intervals in each stratum encountered to aid in the description and classification of the subsurface. All soil descriptions and classifications were recorded on a boring log by a Dames & Moore geologist.

Subsurface soil samples were collected from each stratum above the ground water table in MW-BCK-3 and shipped overnight to ENSECO-Rocky Mountain Analytical

Laboratory (ENSECO) in Arvado, Colorado for background analysis of total chromatographable organics (TCO) and metals. Clean latex gloves were worn at all times during sample handling. A new precleaned stainless steel spoon was used to place each soil sample in the corresponding containers. The sample containers were labeled and documented in accordance with quality assurance/quality control (QA/QC) plan (Task 4). All samples were stored in coolers maintained to approximately 4•C, and then shipped via overnight courier to ENSECO.

MONITORING WELL INSTALLATION

Intermediate monitoring wells were installed to depths ranging from 28 to 30 feet below the ground surface. At all intermediate well locations, 10-1/4-ID HSA were used to drill to the till layer. Subsequently, a cement/bentonite grout was pumped into the borehole as the augers were withdrawn. A 12-inch diameter steel casing with wooden plug was inserted into MW-BCK-3, and driven to the target depth with rig hydraulics and a 140-pound hammer. A 10-inch-diameter steel casing with wooden plug was inserted into all subsequent intermediate wells to facilitate surface casing installation. A wooden plug was used to prevent grout intrusion into the surface casing and to prevent drilling through grout during subsequent well installation. The grouted casing was left undisturbed for a minimum of 48 hours prior to resuming drilling activities.

After surface casings were installed, drilling activities were continued. Boring logs of deep wells and cross-sections were used to aid in the identification of the target depth.

After boring completion, a 2-inch-diameter by 5-foot-length, stainless steel screen and bottom plug were inserted through the top of the augers. The well screens are continuously slotted with 0.010-inch openings. As the screen was lowered into the boring, 2-inch-diameter, Type 304 stainless-steel riser-piping with flush-threaded couplings was attached to the screen with Teflon™ tape as needed to allow a minimum of 2 feet of the stickup above the ground surface. A silica sand (Global Number 5) pack was placed around the screen to a depth of at least 2 feet above the top of the screen. The augers were incrementally withdrawn while the sand was added to allow the pack to fall into place around the screen. An approximately 2-foot thick bentonite seal was then

placed above the sand pack by dropping bentonite pellets into the annulus between the well and the inside of the auger while the augers were gradually removed.

The remaining augers were removed as a cement/bentonite grout was pumped down the hole. The grout mixture placed above the bentonite seal was a Type I Portland cement mixed in a proportion of 5 gallons of water per one bag of cement. Between 2 to 4 pounds of bentonite powder were added to the mix for each bag of cement. The grout was mixed by circulating the mixture until a consistency was obtained. A 1-inch tremie pipe was inserted in the annular space adjacent to the 2-inch riser and extended to the bottom of the annulus. A grout hose was then connected to the tremie pipe, and grout injected under pressure to displace water from above the bentonite seal. This process was continued until grout appeared at the top of the borehole. At least 3 feet of annulus were left at the top of the cement/bentonite grout to allow for cementing and pad installation.

Shallow monitoring wells were installed to depths ranging from 10 to 14 feet. At all shallow well locations, 4-1/4-inch ID HSAs were used to drill to the water-bearing zone.

Upon drilling to a specified depth, a 2-inch-diameter, 10-foot-long, stainless steel screen and bottom plug was inserted through the top of the augers and installed across the zone of water table fluctuation at onsite locations (offsite well screens were 5 feet in length and were set below the zone of water table fluctuation to allow adequate space to seal the annular space). As the well screens were lowered into the boring, 2-inch-diameter, type 304 stainless-steel riser-piping with flush-threaded couplings was attached to the screen with Teflon™ tape as needed to allow a minimum of 2 feet of stickup above the ground surface. A silica sand (Global Number 5) pack was placed around the screen to a depth of aproximately 0.5 to 1.0 foot above the top of the screen. The augers were incrementally withdrawn while the sand was added to allow the pack to fall into place around the screen, holding back the natural formation. An approximately 0.5- to 1.5-foot thick bentonite seal was then placed above the sand pack by dropping bentonite pellets into the annulus between the well and the inside of the auger while the augers were gradually removed. At least 2 feet of annulus was left at the top of the bentonite seal to allow for cement and pad installation.

Depths to the well construction features (top of sand pack, bentonite, etc.) were measured with a weighted fiberglass-coated cloth tape and recorded by the field geologist. A 4-inch-square protective steel casing with locking lid was installed and set in the 2 to 3 feet of concrete. A square concrete pad (3 feet by 3 feet) was then constructed around the well casings after grout was allowed a sufficient time to set. Hand-digging was necessary to excavate surface soil for pad installation. Wooden frames were placed around the excavation prior to pouring the cement. Locks were placed on all wells immediately after installation.

WELL DEVELOPMENT

All wells were developed from February 1 to February 10, 1994, by initially air surging and air-lift pumping using filtered, compressed air, followed by pumping (i.e., hand bailing, Brainard-Kilman submersible) to remove sediments. The volume of water removed from each well was recorded during development. Development continued until fine sediment was not visible in the water sample or no visible improvement occurred. The amount of water recovered from each well during development ranged from 45 to 550 gallons. A minimum of five well volumes were removed from each well during development. All purged water was containerized in labeled 55-gallon drums. A summary of well development data is presented in Table 3-14.

DECONTAMINATION PROCEDURES

All drilling and sampling equipment was steam cleaned prior to handling a new boring. Split spoons were also decontaminated between sampling intervals via steam cleaning.

DRILL CUTTINGS AND PURGE WATER MANAGEMENT

Materials accumulated during well installation activities were placed in Department of Transportation (DOT) approved containers (55-gallon drums or other). The containers were labeled as nonregulated special waste (pending determination). The containers were marked with the date the drum was filled, with a description of the drum contents, and a unique drum number. Drum numbering assignments were coordinated with Dames & Moore's onsite geologist or engineer. The containerized wastes were

transported to the area outside of the wastewater treatment plant for temporary storage while awaiting characterization and profiling for disposal authorization. One composite sample of each media (e.g., soil and water) was collected for analysis deemed necessary by the receiving disposal facility.

TECHNICAL MEMORANDUM NO. 2
GROUND WATER SAMPLING

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-029-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	David S. Hunsinger	**Date:**	August 7, 1991

SUMMARY OF TASKS PERFORMED

Ground water samples were collected by Dames & Moore on April 24 to May 5, 1991 from 22 monitoring wells installed by Dames & Moore. Monitoring well MW-G2 was resampled on May 8, 1991, for semivolatile organic compounds. Monitoring well MW-G3 was resampled for halogenated volatile organic compounds on June 20, 1991. Resampling was necessary to maintain proper Quality Assurance/Quality Control (QA/QC) protocol. Sample identifications designated for these samples were the "GW" series. Monitoring well locations are shown on Figure 3-4.

GROUND WATER SAMPLING

All monitoring wells were checked for above ground damage and screened for organic vapors with an HNu photoionization detector (PID) upon opening (see Table 3-18). Prior to purging each well, the ground water level and well depth were measured with a Solinst electronic water level indicator.

Purging and sampling of each well was performed using precleaned, dedicated Teflon™ bailers. The bailer was raised and lowered using a new length of braided nylon cord. Prior to sampling, a minimum of three well volumes was purged from each well. Periodic measurements of pH, specific conductance and temperature were made while purging until each parameter stabilized to within 0.25 pH units, 50 μmhos/cm and 0.5•F, respectively. Sampling details and field parameters are presented on Table 3-16. Ground water samples were then collected from each well and transferred to laboratory-supplied sample containers via the dedicated bailer. Care was taken not to aerate the sample.

Where applicable, ground water samples were collected in containers with preservatives, provided by the laboratory. The following is a list of parameters analyzed, the types of bottles used, and preservatives, in the order sampled.

Parameter	Container	Preservative
VOCs	nine 40-mL glass	0.2 mL 50% HCl
SVOCs	two 1-liter glass	none
Pesticides/PCBs	two 1-liter glass	none
Dioxin/Furan	two 1-liter glass	none
Herbicides	one 1-liter glass	none
Sulfide	one 250-mL plastic	2 mL with zinc acetate and 1 mL 50% NaOH
Cyanide	one 250 mL plastic	2 mL 50% NaOH
Metals	two 500 mL plastic	4 mL 50% HNO_3

The dissolved metals sample was transferred into a plastic cup and filtered into the sample container using a peristaltic pump equipped with a dedicated 0.45-micron filter. All samples were labeled with the site name, sample ID, time, date, preservatives, samplers signature, and required analytical method. Sample containers were stored in coolers maintained at approximately 4•C, and shipped via overnight courier to ENSECO-Rocky Mountain Analytical Laboratory (ENSECO) in Arvado, Colorado.

To evaluate the effectiveness of the sampling procedures, several field blanks were collected. Each field blank was collected before sampling a predesignated well. Prior to collecting a field blank, approximately 2 feet of braided nylon bailing cord was placed into the bailer. The bailer was then filled with deionized water and the field blank sample was collected by pouring the deionized water from the bailer into the laboratory-supplied containers. After the field blank was collected, the rope was removed from the bailer and a new piece of rope was attached to the top of the bailer. The bailer was then lowered into the well.

DECONTAMINATION PROCEDURES

All sampling equipment was decontaminated prior to and following sample collection using the following steps.

- Warm water and Alconox™ scrub
- Tap water rinse
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Triple distilled water rinse

Each bailer was decontaminated before use, and left suspended above the water table in the wells after sampling. All disposable sampling and personal protective equipment was double bagged and placed in a designated area onsite. If not disposable, personal protective equipment remained onsite during the course of field activities and was decontaminated prior to removal from the site.

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

SUMMARY OF TASKS PERFORMED

Ground water samples were collected by Dames & Moore January 29, 1994 and February 18 to February 24, 1994 from 22 Phase I and 10 Phase II monitoring wells installed by Dames & Moore. Monitoring well MW-F3 was resampled on February 22, 1994 for semivolatile organic compounds since sample bottles were damaged during overnight shipping. Sample identifications designated for these samples were the "GW" series. Monitoring well locations are shown on Figure 3-5.

GROUND WATER SAMPLING

All monitoring wells were checked for above ground damage and screened for organic vapors with an HNu PID upon opening (see Table 3-19). Prior to purging each well, the ground water level and well depth were measured with a slope indicator electronic water level indicator.

Purging and sampling of each well was performed using precleaned, dedicated Teflon™ bailers. The bailer was raised and lowered using a new length of braided nylon cord. Prior to sampling, a minimum of three well volumes were purged from each well. Measurements of pH, specific conductance, and temperature were made while purging until all three parameters stabilized to within 0.25 pH units, 50 µmhos/cm, and 0.5•F, respectively or five well volumes were purged. Sampling details and field parameters are presented on Table 3-17. Ground water samples were then collected from each well and transferred to laboratory-supplied sample containers via the dedicated bailer. Care was taken not to aerate the sample.

Where applicable, ground water samples were collected in containers with preservatives, provided by the laboratory. The following is a list of parameters analyzed for Phase II wells, the types of bottles used, and preservatives, in the order sampled.

Parameter	Container	Preservative
VOCs	nine 40-mL glass	0.2 mL 50% HCl
SVOCs	two 1-liter glass	none
Pesticides/PCBs	two 1-liter glass	none
Herbicides	one 1-liter glass	none
Sulfide	one 250-mL plastic	2 mL with zinc acetate and 1 mL 50% NaOH
Cyanide	one 250 mL plastic	2 mL 50% NaOH
Metals	one 500 mL plastic	4 mL 50% HNO_3

Samples collected from Phase I wells were analyzed for VOCs, SVOCs, cyanide, and dissolved metals. The dissolved metals sample was transferred into a dedicated plastic cup and filtered into the sample container using a peristaltic pump equipped with a 0.45-micron filter. All samples were labeled with the site name, sample ID, time, date, preservatives, samplers signature, and required analytical method. Sample containers were stored in coolers maintained at approximately 4•C, and shipped via overnight courier to ENSECO.

In addition QA/QC samples were collected during the Phase II RFI. Duplicate ground water samples were collected at four wells (MW-F4, MW-J2, MW-J3, and MW-A5) and matrix spike/matrix spike duplicate samples were collected from three wells (MW-F4, MW-J2, MW-J3) in accordance with the QA/QC plan (Task 4).

To evaluate the effectiveness of decontamination procedures, four field blanks were collected. These include: FB/MW-A4/1, FB/MW-F2/1, FB/MW-C2/1, and FB/MW-B4/1. Each field blank was collected before sampling a predesignated well. The pre-cleaned bailer was filled with deionized water and the field blank sample was collected by pouring the deionized water from the bailer into the laboratory-supplied containers.

DECONTAMINATION PROCEDURES

All sampling equipment was decontaminated prior to sample collection using the following steps.

- Warm water and TriSodium Phosphate (TSP) scrub

- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Triple distilled water rinse

Each bailer was decontaminated before use, and left suspended above the water table in the wells after sampling.

TECHNICAL MEMORANDUM NO. 3

RFI PHASE I
SUBSURFACE SOIL SAMPLING

Site:	Stanley Tools	**Job No.:**	03163-029-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	Anne Lundahl	**Date:**	July 2, 1991

SUMMARY OF TASKS PERFORMED

The shallow soil boring program for Phase I of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was conducted by Dames & Moore between April 15, 1991 and April 22, 1991. In addition, boring E-1 was recollected on May 23, 1991 to maintain proper QA/QC protocol. During the course of field activities, the health and safety guidelines were followed as specified in *Task 7: Health and Safety Plan*. The Dames & Moore site safety officer monitored activities of Dames & Moore staff and subcontractors onsite at all times.

A total of 15 borings was drilled in the following units: Units B, C, E, J, K, and L (see Figure 3-4 for boring locations). The soil sampling strategy called for the installation of shallow borings to determine the absence or presence of contamination in the areas of the former units. Soil sampling was conducted during boring operations. A total of 36 investigative soil samples, including six field duplicate samples, were submitted to ENSECO-Rocky Mountain Analytical Laboratory (RMAL) in Arvada, Colorado for analyses using analytical methods in accordance with the United States Environmental Protection Agency (U.S. EPA) Manual SW-846, entitled *Test Methods for Evaluating Solid Waste Physical/Chemical Methods*. Laboratory results are summarized in Table 5-7. A total of eight undisturbed soil samples were also analyzed for the following physical properties to aid in subsurface characterization: porosity, organic content, particle size, Atterberg limits, moisture content, pH, and cation exchange capacity. The physical properties analysis results are summarrized on Table 4-3. The sample identifications designated for these samples are the "SO" series. The identification indicated the media type of sample, the unit the sample was collected, the boring within the unit, and the sample interval collected within the boring (e.g., SO/B-

1/1). All borehole drilling was performed by Professional Services Industries, Inc. (PSI), under the direct supervision of Dames & Moore.

DRILLING AND SOIL SAMPLING

PREDRILLING ACTIVITIES

The locations of the shallow borings were proposed in the Phase I RFI strategy and approved by the U.S. EPA prior to the start of drilling. The proposed locations were identified onsite with stakes and flags.

DRILLING EQUIPMENT

A CME-55 all-terrain vehicle (ATV) drill-rig, was used to drill all of the borings. The rig utilized 3-1/4-inch-inner diameter (ID) hollow-stem augers (HSA).

SAMPLING PROCEDURES

The standard penetration test (SPT) (ASTM D-1586-84) method with a 2-foot drive was used to sample the boring for physical analysis. The method consisted of driving a 2-inch-outer diameter (OD), 24-inch-long split spoon a total of four 6-inch increments, using a 140-pound hammer. The hammer is allowed to fall 30 inches. Brass rings were inserted into the split spoon to provide an adequate undisturbed sample for analysis of soil properties. At each location, the borehole was advanced to a depth of 5 feet below ground surface. In select borings, one sample from each stratum encountered above the water table was collected in the undisturbed linear samples. The samples were analyzed for soil properties summarized on Table 4-3.

The SPT method was used to collect samples for chemical analysis for borings B-5 and B-6. At that time it was determined that in order to collect sufficient sample volume to run selected sampling protocols, 3-inch-OD, 18-inch-long split spoons were required. The method consisted of driving the 3-inch-OD split spoon a total of three 6-inch increments using a 140-pound hammer. The hammer was allowed to fall 30 inches. Continuous subsurface soil sampling was performed at 1.5-foot intervals throughout the

depth of each boring. After recovery, each split-spoon sample was placed on a sheet of aluminum foil, opened, and immediately screened with an HNu PI-101 photoionization detector (PID), with a 10.2 eV probe. The soil samples were then described and evaluated for absence or presence of contamination and recorded on boring logs. Criteria for this evaluation included discoloration, chemical odor, and PID readings. A representative portion of each sample was then collected and placed in a sample jar to perform headspace analysis by covering the lid with aluminum foil, setting the jar in a warm area, and then pushing the HNu probe through the foil and recording the reading (see Table 3-18). Soil samples were then field classified and all pertinent drilling information recorded by a Dames & Moore geologist (see Appendix F). After the last split-spoon sample was collected from a boring, the entire soil sequence was viewed and two samples were chosen from each boring for chemical analysis. The selected samples were chosen based on field judgement of the supervising geologist.

Because the closure procedures and exact locations of Units B, C, and E were questionable, five sampling scenarios were employed during boring operations and are presented on Table 7 in the *Task 3: RFI Strategy*. However, the guidelines were modified due to field conditions encountered during drilling. Since the water table was encountered at shallow depths (1.5 to 5.0 feet), borings were advanced beyond the water table. Fill was first encountered in all borings performed in these Units B, C, and E. The borings were advanced until sludge residue, contaminated soil, or natural soil was encountered below fill. Two samples were collected from each shallow boring, as follows: one collected from the fill, and one collected near the depth of the boring where evidence of contamination was observed in the field.

Two soil samples were collected from each shallow boring performed in Unit J for chemical analysis. The samples were collected at two depth intervals: near ground surface, and directly above the water table.

The shallow borings were performed in Units K and L at locations downgradient of the backfilled areas to assess the possibility of releases from the former tanks. Two soil samples were collected for chemical analysis from two borings installed in Unit K and one boring installed in Unit L. If no evidence of contamination was observed in the field, one sample was collected near ground surface and the second sample from directly above the water table. If evidence of contamination was observed in the field, one

sample was selected near ground surface and one visually contaminated soil sample just above the water table.

The samples selected for chemical analysis were then placed in appropriate sample containers with Teflon™ lids and tightly sealed, using a new, precleaned spoon for each sample location.

Additional borings were performed adjacent to select borings in each unit to collect samples at depths corresponding with those selected for chemical analysis from the original boring. The additional sample volumes were required to run field duplicate samples in accordance with the quality assurance/quality control (QA/QC) plan (Task 4), as follows: SO/B-7 collected as field duplicate for SO/B-6; SO/C-3 collected as field duplicate for SO/C-2; and SO/J-3 collected as field duplicate for SO/J-1. The soil samples from corresponding depth intervals were placed on a new, precleaned aluminum pan and thoroughly composited, prior to transferring to the appropriate sample container via a precleaned, stainless steel spoon.

To evaluate if any contaminants were being introduced as a result of sampling decontamination procedures, three field blank samples were collected using deinonized water, as follows: SO/FB-1/B collected prior to SO/B-3; SO/FB-1/C colected prior to SO/C-1; and SO/FB-1/J collected prior to SO/J-2 boring. Following decontamination procedures, deionized water was poured over the sampling split-spoon and allowed to drain directly into the laboratory-supplied containers.

Clean latex gloves were worn at all times during sample handling. A new, precleaned stainless steel spoon was used to fill the containers for each sample. The samples were labeled and documented in accordance with the QA/QC plan. All samples were stored at 4°C and then shipped in coolers via overnight courier to the laboratory.

DECONTAMINATION PROCEDURES

All drilling equipment was steam cleaned prior to handling a new boring. Split spoons were also decontaminated between sampling intervals with an Alconox™ and water wash, followed by steam cleaning. All other sampling equipment, including sampling spoons and aluminum tins, were dedicated to each sample collection. If not

disposable, personal protective equipment remained onsite during the course of field activities, and decontaminated prior to site removal.

TECHNICAL MEMORANDUM NO. 3
SUBSURFACE SOIL SAMPLING

RFI PHASE II

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

SUMMARY OF TASKS PERFORMED

The shallow soil grid boring program for Phase II of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was conducted by Dames & Moore between January 10, 1994 and February 8, 1994. During the course of field activities, the health and safety guidelines were followed as specified in *Task 7: Health and Safety Plan.* The Dames & Moore site safety officer monitored activities of Dames & Moore staff and subcontractors onsite at all times.

A total of 99 borings was drilled at nodes of each grid cell of an area that encompasses two areas of concern and the following units: Units A, B, C, E, F, G, H, I, J, and K (see Figure 3-5 for boring locations). One area of concern (AOC 1) is located within the former plant building at the location of a former chromium recovery operation. The second area (AOC 2) is located directly north of the former cyanide treatment tanks where floating product was encountered in the soil beneath a sump. Soil had been excavated in AOC 2, requiring the two borings (GB-77 and GB-78) to be moved to the southwest and northeast edge of the area of concern. The soil sampling strategy was to advance shallow borings to assess the absence or presence of contamination in the areas of the former units. Soil sampling was conducted during boring operations. A total of 108 investigative soil samples, including nine field duplicate samples, were submitted to ENSECO-Rocky Mountain Analytical Laboratory (RMAL) in Arvada, Colorado for analyses using analytical methods in accordance with the United States Environmental Protection Agency (U.S. EPA) Manual SW-846, entitled *Test Methods for Evaluating Solid Waste Physical/Chemical Methods.* Laboratory results are summarized in Table 5-8A and 5-8B. A total of 13 soil borings were drilled to depths greater than 6 feet because natural soils were not encountered or signs of impact existed beyond that depth. The sample identifications designated for these samples are the "SO" series. The

identification indicated the media type of sample, the grid boring sample designation, and the sample interval collected within the boring (e.g., SO/GB-45). All borehole drilling was performed by Stearns Drilling, under the direct supervision of Dames & Moore.

DRILLING AND SOIL SAMPLING

PREDRILLING ACTIVITIES

The locations of the shallow borings were proposed in the Phase I RFI strategy and approved by the U.S. EPA prior to the start of drilling. The proposed locations were identified onsite with stakes and flags.

Sections of dense woodlands adjacent to the northern ditch and within Area F were cleared by the drill rig as necessary to gain access to several grid boring locations. All work was conducted under the supervision of Dames & Moore.

DRILLING EQUIPMENT

A CME-850 all-terrain vehicle (ATV) drill-rig, was used to drill all of the borings. The rig utilized 4-1/4-inch-inner diameter (ID) hollow-stem augers (HSA). Four grid borings were hand augered because the sites were inaccessible by the rig.

SAMPLING PROCEDURES

The standard penetration test (SPT) (ASTM D-1586-84) method with a 2-foot drive was used to sample the boring for physical analysis. The method consisted of driving a 2-inch-outer diameter (OD), 24-inch-long split spoon a total of four 6-inch increments, using a 140-pound hammer. The hammer is allowed to fall 30 inches. At each location, the borehole was advanced to natural soil or to a depth of 6 feet below ground surface, whichever is deeper. For certain borings that required sufficient sample volume to run matrix spike/matrix spike duplicate analyses, 3-inch-OD, 24-inch-long split spoons were used. The method consisted of driving the 3-inch-OD split spoon a total of four 6-inch increments using a 140-pound hammer. The hammer was allowed to fall 30 inches.

Continuous subsurface soil sampling was performed at 2.0-foot intervals throughout the depth of each boring. After recovery, each split-spoon sample was opened and immediately screened using an HNu PI-101 photoionization detector (PID) with a 10.2 eV probe. The soil samples were then described and evaluated for absence or presence of contamination and recorded on boring logs. Criteria for this evaluation included discoloration, chemical odor, and PID readings. Soil samples were then field classified and all pertinent drilling information was recorded by a Dames & Moore geologist (see Appendix E). After the last split-spoon sample was collected from a boring, the entire soil sequence was viewed and one sample was chosen from each boring for chemical analysis. The selected sample was chosen based on field judgment of contamination by the supervising geologist or the upper 2-foot interval, if no signs of contamination were observed.

Three-inch-OD split spoons were used or additional borings were performed adjacent to select borings at depths corresponding with those selected from the original boring to collect samples for chemical analysis. The additional sample volumes were required to run matrix spike/matrix spike duplicate analyses in accordance with the quality assurance/quality control (QA/QC) plan (Task 4). The following grid boring samples were also collected for matrix spike/matrix spike duplicate analysis: SO/GB-15/2, SO/GB-24/2, SO/GB-33/1, SO/GB-45/1, SO/GB-63/1, SO/GB-65/2, SO/GB-83/2, SO/GB-92/1, and SO/GB-99/3. The soil samples from corresponding depth intervals were divided and transferred to the appropriate sample container via a precleaned stainless steel spoon.

Four grid boring locations were advanced using a hand auger. The sample collected was transferred into an aluminum foil-lined pan for each 2-foot interval immediately screened using an HNu PI-101 photoionization detector (PID) with a 10.2 eV probe (see Table 3-19). The soil samples were then described and evaluated for absence or presence of contamination and recorded on boring logs. Criteria for this evaluation included discoloration, chemical odor, and PID readings. One sample was chosen among the 2-foot intervals of the boring. The selected sample was then chosen based on field judgment of contamination by the supervising geologist or the upper 2-foot interval, if no signs of contamination were observed.

The samples selected for chemical analysis were then placed in appropriate sample containers with Teflon™ lids and tightly sealed, using a new, precleaned spoon for each sample location.

To evaluate the effectiveness of decontamination procedures, nine field blank samples were collected using deionized water, as follows: FB/GB-3/2, FB/GB-14/1, FB/GB-23/2, FB/GB-32/1, FB/GB-54/3, FB/GB-63/1, FB/GB-86/2, FB/GB-92/1, and FB/GB-99/3. All field blanks were collected subsequent to sampling and decontamination of the split spoon. Following decontamination procedures, deionized water was poured over the sampling split-spoon and allowed to drain directly into the laboratory-supplied containers.

Clean latex gloves were worn at all times during sample handling. A new, precleaned stainless steel spoon was used to fill the containers for each sample. The samples were labeled and documented in accordance with the QA/QC plan. All samples were stored at 4°C and then shipped in coolers via overnight courier to the laboratory.

DECONTAMINATION PROCEDURES

All drilling equipment was steam cleaned prior to handling a new boring. Split spoons were also decontaminated between sampling intervals with an Alconox™ and water wash, followed by steam cleaning. All other sampling equipment, including sampling spoons, were decontaminated prior to and following sample collection using the following steps:

- Warm water and TSP scrub
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Double distilled water rinse
- Wrapped in aluminum foil for storage and transportation

DRILL CUTTINGS AND PURGE WATER MANAGEMENT

Materials accumulated during well installation activities were placed in Department of Transportation (DOT) approved containers (55-gallon drums or other).

The containers were labeled as nonregulated special waste (pending determination). The containers were marked with the date the drum was filled, with a description of the drum contents, and a unique drum number. Drum numbering assignments were coordinated with Dames & Moore's onsite geologist or engineer. The containerized wastes were transported to the area outside of the wastewater treatment plant for temporary storage while awaiting characterization and profiling for disposal authorization. One composite sample of each media (e.g., soil and water) was collected for analysis deemed necessary by the receiving disposal facility.

TECHNICAL MEMORANDUM NO. 4
RED CEDAR RIVER SAMPLING

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-029-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	David S. Hunsinger	**Date:**	July 26, 1991

RED CEDAR RIVER SAMPLING

Riverbank soil, surface water, and river sediment samples were collected by Dames & Moore on April 18 to April 22, 1991 at each of the five Red Cedar River locations shown in Figure 3-4. Sampling proceeded from downstream (RC-5) to upstream (RC-1) locations. Resampling of the sediment at station RC-3 was performed on May 29, 1991 due to a missed holding time for laboratory analysis of the semivolatile fraction.

Riverbank Sampling

At each sampling location, the riverbank sample was collected first. The sample was collected from 0- to 6-inches below the ground surface at the highest point on the river bank. The sample was collected using a dedicated, pre-cleaned stainless steel scoop and placed into a new, pre-cleaned aluminum pan. The sample was mixed with the scoop and placed in the corresponding sample containers provided by the laboratory. Sample descriptions are listed below.

Sample	Volume Collected (ounces)	Sample Description	Parameters Analyzed (see Table 5-5)
SO/RC-1	24	Dark brown-black SAND with humus	Protocol B
SO/RC-2	24	Dark brown-gray, poorly-sorted, fine SAND, with clay and silt	Protocol B
SO/RC-3	24	Dark brown-gray, poorly-sorted, fine SAND, with clay and silt	Protocol B
SO/RC-4	24	Dark brown-black SAND with humus	Protocol B
SO/RC-5	24	Black silty SAND with humus	Protocol B

Each sample was labeled and documented in accordance with the Quality Assurance/Quality Control (QA/QC) plan (Task 4). All samples were stored in coolers maintained approximately 4°C, and shipped via overnight courier to ENSECO-Rocky Mountain Analytical Laboratories (ENSECO).

Surface Water Sampling

Surface water samples were collected near the northeastern riverbank at a point orthagonal to the riverbank sampling point. The samples were collected approximately 2 feet from the bank by extending a new, pre-cleaned stainless steel beaker connected to a stainless steel rod. The beaker was inverted, immersed to mid-depth then slowly rotated in the upstream flow direction allowing the beaker to fill with surface water. Surface water samples were then transferred directly from the beaker to laboratory-supplied containers. After all sample containers were filled at each location, an additional volume was collected for field analysis of temperature, pH, and specific conductance. These parameters were measured with a Hydac™ instrument.

The surface water samples were labeled and documented in accordance with the QA/QC plan (Task 4). All samples were stored in coolers maintained at approximately 4°C, and shipped via overnight courier to ENSECO.

All surface water samples were analyzed for protocol C parameters including: priority pollutant volatiles, priority pollutant semivolatiles, barium, cadmium, chromium, copper, nickel, silver, zinc, arsenic, lead, mercury, selenium, cyanide (total), and total dissolved solids (See Table 5-6).

Sediment Sampling

Sediment samples were collected from the riverbed directly below the surface water sample location. A 2-inch outside diameter steel split-spoon connected to a 5-foot-steel rod was used to sample the sediment. The split-spoon was hand driven into the sediment 12 to 18 inches. Samples from the upper 3 inches and from 6 to 12 inches were placed in separate, new, pre-cleaned, aluminum pans. This process was repeated until a sufficient volume of sample had been obtained. The sample was then mixed with a new,

pre-cleaned, stainless steel spoon. A total of 24 ounces of sediment was placed into the corresponding sample containers provided by the laboratory. A description of each sample is provided below.

Sample	Volume Collected (ounces)	Sample Description	Parameters Analyzed (see Table 5-5)
SE/RC-1/3	24	Brown to black SILT with humus and trace of coarse gravel and sand	Protocol B
SE/RC-1/12	24	Dark brown SILT with some sand and gravel and trace of roots	Protocol B
SE/RC-2/3	24	Dark brown to black SILT with sand, humus, and some coarse gravel	Protocol B
SE/RC-2/12	24	Dark gray to black, sandy CLAY, with silt, and fine to coarse gravel, wet	Protocol B
SE/RC-3/3	24	Dark brown to black, clayey SILT with humus, loose, wet	Protocol B
SE/RC-3/12	24	Dark brown to black, silty fine SAND with trace of fine to medium gravel and humus	Protocol B
SE/RC-4/3	24	Black to dark brown SILT with some sand and humus	Protocol B
SE/RC-4/12	24	Gray to black silty SAND with some humus	Protocol B
SE/RC-5/3	24	Dark gray, very fine to fine, poorly-sorted, silty SAND with trace of humus	Protocol B
SE/RC-5/12	24	Dark gray to black SILT with trace of sand and humus	Protocol B

The samples were labeled and documented in accordance with the QA/QC plan (Task 4). All samples were stored in coolers maintained at approximately 4°C, and shipped via overnight courier to ENSECO.

DECONTAMINATION PROCEDURES

All sampling equipment was decontaminated prior to and following sample collection using the following steps.

- Warm water and Alconox™ scrub
- Tap water rinse
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Triple distilled water rinse

The split spoon used for sediment sampling was decontaminated before and after each sampling location. All disposable sampling and personal protective equipment was double bagged and placed in a designated area onsite. If not disposable, personal protective equipment remained onsite during the course of field activities, then was decontaminated prior to removal from the site.

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

RED CEDAR RIVER SAMPLING

Riverbank soil, and river sediment were collected by Dames & Moore from the Red Cedar River on January 9 through 11, 1994. Riverbank soil was sampled at three locations adjacent to the site. River sediments were sampled at each of the eight river locations shown in Figure 3-5. Sampling proceeded from downstream (RC-6) to upstream (RC-13) locations. River surface water samples were not collected.

Riverbank Sampling

Riverbank soil samples were collected at three sampling locations adjacent to the site. Samples were collected approximately 10 feet from the normal edge of the river. Samples were collected using a hand auger advanced to a depth of approximately 6-inches, and transferred using a new, pre-cleaned stainless steel scoop into dedicated aluminum pans. The sample was mixed with the scoop, and placed in the corresponding sample containers provided by the laboratory. Sample descriptions are shown below.

Sample	Volume Collected (ounces)	Sample Description	Parameters Analyzed (see Table 5-5)
SO/RC-8	20	Black SILT	Protocol B
SO/RC-9	20	Dark brown SILT	Protocol B
SO/RC-10	20	Dark brown SILT	Protocol B

The samples were labeled and documented in accordance with the QA/QC plan (Task 4). All samples were stored in coolers maintained at approximately 4°C, and shipped via overnight courier to ENSECO.

Sediment Sampling

Sediment samples were collected from the riverbed approximately 2 feet from the riverbank. Samples from the upper 3 inches and from 6 to 12 inches were collected using a hand auger and placed in separate new aluminum pans. The sample was mixed with a new, pre-cleaned stainless steel spoon and placed in corresponding sample containers provided by the laboratory.

Additional samples were collected at two river sediment locations and one riverbank soil location to run field duplicate and matrix spike/matrix spike duplicate samples in accordance with QA/QC plan (Task 4). The river sediment samples were SE/RC-10/2 and SE/RC-13/2; the river bank soil sample was SO/RC-10/1. To evaluate the effectiveness of decontamination procedures, a field blank was collected after sampling SE/RC-13/2. The field blank was collected by pouring deionized water over the sampling auger and into the laboratory-supplied containers.

The samples were labeled and documented in accordance with the QA/QC plan (Task 4). All samples were stored in coolers maintained at approximately 4°C, and shipped via overnight courier to ENSECO.

DECONTAMINATION PROCEDURES

All sampling equipment (auger, scoops, aluminum pan) was decontaminated prior to and following sample collection using the following steps.

- Warm water and Tri Sodium Phosphate (TSP) scrub
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Double distilled water rinse

TECHNICAL MEMORANDUM NO. 5

SLUDGE SAMPLING

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-029-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	Anne Lundahl	**Date:**	July 30, 1991

SUMMARY OF TASKS PERFORMED

The sludge sampling for Phase I of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was conducted by Dames & Moore between May 8 and May 9, 1991. However, SL/G-5 and SL/G-4 (a duplicate of SL/G-5) were resampled on June 5, 1991 for the polychlorinated biphenyl (PCB) fractions, since the holding time was exceeded on the original samples collected and submitted to the laboratory. During the course of field activities, the health and safety guidelines were followed as specified in *Task 7: Health and Safety Plan.* The Dames & Moore site safety officer monitored activities of Dames & Moore staff.

A total of 10 composite sludge samples was collected in Units F, G, H, and I (Figure 3-4). The sludge sampling strategy consisted of sample collection from these units to characterize the sludge. The samples were submitted to ENSECO-Rocky Mountain Analytical Laboratory (ENSECO) in Arvada, Colorado for analyses using analytical methods in accordance with the United States Environmental Protection Agency (U.S. EPA) Manual SW-846, entitled *Test Methods for Evaluating Solid Waste Physical/Chemical Methods.* The sample identifications designated for these samples were the "SL" series. The identification indicated the media type of sample, the unit from which the sample was collected, and the sample location within the unit.

Sludge sample SL/F-2 was analyzed for total chromatographable organics only. SL/I-1, SL/G-2, and SL/H-1 were analyzed for TCLP metals and volatile organic compounds (VOCs). All other sludge samples (SL/F-1, SL/F-3, SL/G-1, SL/G-3, SL/G-

4, and SL-G5) were analyzed for protocol A constituents (see Table 5-1). The protocol A constituents are listed in Table 5-3.

In addition a sludge sample was collected from the area of Unit H, and analyzed for the following properties: porosity, organic content, particle size, Atterberg limits, moisture content, pH, and cation exchange capacity.

SLUDGE SAMPLING

PRESAMPLING ACTIVITIES

Unit perimeters were staked and flagged based on the presence of sludge and the location of berms surrounding the units, where applicable. Units F and G were divided into three and four areas, respectively.

Stainless steel scoops and aluminum pans were cleaned and wrapped at the Dames & Moore field office prior to the sampling event. The equipment was cleaned in sequence using the following steps:

- Warm water and Alconox™ scrub
- Tap water rinse
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Triple distilled water rinse

After the final rinse, the equipment was wrapped in aluminum foil for transport to the sampling locations.

SAMPLING PROCEDURES

A total of 10 composite sludge samples were collected from the units as follows: three samples from Unit F; five samples from Unit G, including SL/G-5 (a field duplicate of SL/G-4); one sample from Unit H; and one sample from Unit I. Sludge samples from

Unit G were characterized as a bluish-white to light olive green silty sludge. Sludge characteristics from Unit F were unavailable.

In each area, a new, precleaned stainless steel scoop was used to collect 10 grab samples, which were approximately 75 grams each. The sludge was scooped from various depths at each grab sampling location, and placed in a new, precleaned aluminum pan. After all 10 grab samples were collected, a composite sample was made by mixing the sludge in the pan. A new, precleaned stainless steel scoop was then used to place the sample in the corresponding containers provided by the laboratory. The containers were labeled, and documented in accordance with the Quality Assurance/Quality Control (QA/QC) plan. All samples were stored in coolers maintained at approximately 4°C, and shipped via overnight courier to ENSECO.

DECONTAMINATION PROCEDURES

Following sample collection, all sampling equipment was decontaminated prior to removal from the site using the following steps:

- Warm water and Alconox™ scrub
- Tap water rinse
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Triple distilled water rinse

All disposable sampling and personal protection equipment was double bagged and placed in a designated area onsite. If not disposable, personal protective equipment remained onsite during the coarse of field activities, and decontaminated prior to removal from the site.

RFI PHASE II

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

SUMMARY OF TASKS PERFORMED

The sludge sampling for Phase II RFI was conducted by Dames & Moore on January 23 and February 3, 1994. During the course of field activities, the health and safety guidelines were followed as specified in *Task 7: Health and Safety Plan.* The Dames & Moore site safety officer monitored activities of Dames & Moore staff and subcontractors onsite at all times.

A total of three shallow borings were drilled, and sludge samples were collected in Units B, C, and E (see Figure 3-5 for sampling locations). The sludge sampling strategy was to assess the presence or absence of sludge within the respective unit, the vertical extent of sludge, and to collect samples from the lower portion of the sludge (if present). The samples were submitted to ENSECO in Arvada, Colorado for analyses using analytical methods in accordance with the U.S. EPA Manual SW-846, entitled *Test Methods for Evaluating Solid Waste Physical/Chemical Methods.* The sample identifications designated for these samples were the "SL" series. The identification indicated the media type of sample, the unit from which the sample was collected, and the sample location within the unit.

All drilling was performed by Sterns Drilling, under the supervision of Dames & Moore.

DRILLING AND SLUDGE SAMPLING

PREDRILLING ACTIVITIES

The locations of the sludge shallow borings were proposed in the Phase II RFI Work Plan and approved by the U.S. EPA prior to the start of drilling. The proposed locations were identified onsite with stakes and flags.

DRILLING EQUIPMENT

A CME-850 all-terrain vehicle (ATV) drill-rig, was used to drill all borings. The rig utilized 4-1/4-inch-inner diameter (ID) hollow-stem augers (HSA).

SAMPLING PROCEDURES

Split spoons were used to collect sludge samples for chemical analysis. Three-inch-OD, 24-inch-long split spoons were used to collect sufficient sample volume to test for selected parameters. The method consisted of driving the 3-inch-OD split spoon a total of four 6-inch increments using a 140-pound hammer. The hammer was allowed to fall 30 inches. At each location, the borehole was advanced to natural soil below ground surface. Continuous subsurface soil sampling was performed at 2-foot intervals throughout the depth of each boring. After recovery, each split-spoon sample was opened and immediately screened with an HNu PI-101 photoionization detector (PID) equipped with a 10.2 eV probe (see Table 3-19). The soil samples were then described and evaluated for absence or presence of sludge and recorded on boring logs. Criteria for this evaluation included discoloration, chemical odor, and PID readings. Soil samples were then field classified and drilling information recorded by a Dames & Moore geologist (see Appendix E).

The goal of each boring was to ascertain the thickness and total depth of sludge that may exist in Units B, C, and E.

Since the water table was encountered at shallow depths (3 to 5 feet below ground surface), borings were advanced beyond the water table. Fill material was first

encountered in all borings performed in Units B, C, and E. The borings were advanced through sludge residue and/or impacted soil, to the natural soil below the fill material. One sample was collected from within the sludge or impacted fill at each shallow boring location. One sample was collected from the depth of the boring where evidence of impact was observed in the field. These samples were tested for TCLP VOCs, TCLP SVOCs, PCBs, cyanide, TCLP metals (including copper and zinc for borings Unit B and E), TCLP herbicides (for Unit B and C), and petroleum hydrocarbons and total metals for Unit E only.

The samples selected for chemical analysis were then placed in corresponding sample containers, using a new, precleaned spoon for each sample location.

Additional borings were performed adjacent to boring E-3 to collect samples at depths corresponding with those selected for chemical analysis from the original boring. An additional sample volume was required at this location for field duplicate and matrix spike/matrix spike duplicate samples in accordance with the QA/QC plan (Task 4). The soil samples from corresponding depth intervals were transferred to the corresponding sample container via a precleaned, stainless steel knife.

Dedicated latex gloves were worn at all times during sample handling and changed between sample locations. The samples were labeled and documented in accordance with the QA/QC plan (Task 4). All samples were stored in coolers maintained at approximately 4°C and shipped via overnight courier to ENSECO.

DECONTAMINATION PROCEDURES

All drilling equipment was steam-cleaned prior to drilling a new boring. Split spoons were also decontaminated between sampling intervals using Tri Sodium Phosphate (TSP) wash, followed by steam cleaning. All other sampling equipment, including sampling spoons were dedicated to each sample collection.

TECHNICAL MEMORANDUM NO. 6
EXPLORATORY TRENCH INVESTIGATION AND SLUDGE UNIT SURVEYS

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-029-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	Anne Lundahl	**Date:**	August 7, 1991

SUMMARY OF ACTIVITIES PERFORMED

To estimate the sludge volume in Units F and G, an exploratory trench investigation was conducted by Dames & Moore in the vicinity of Units F and G on June 20 and July 8, 1991.

EXPLORATORY TRENCH INVESTIGATION

A backhoe was utilized to excavate three small trenches in unit F (one in each sample area) and six small trenches in unit G (see Figure 3-4). The trenches were dug to a depth where brown fine to medium sand fill was encountered below the sludge. Liners, reportedly present in the units, were not encountered during the trench investigation. The sand fill may have been placed over the liner during construction for leachate collection. Excavation was performed manually with a shovel to determine the sludge thicknesses in Units H and I. The depth of the sludge encountered was measured directly from the trench walls and recorded in the field logbook.

Units F, G, H, and I were then surveyed for their horizontal boundaries on July 9, 1991.

The sludge volumes present in each unit was then estimated using the area from the surveyed unit boundaries and sludge thicknesses measured in the field during exploratory trenching in Unit F and G, and manual excavations in Units H and I. The

measured sludge thicknesses, estimated average sludge thicknesses, and estimated area used to calculate sludge volumes are presented in Table 3-20. It should be noted that Unit G was subdivided into three areas for estimating of average sludge thickness since field observations and trenching should be variable thicknesses across the unit (Table 3-20; Figure 3-7). The total estimated sludge volume in Units F, G, H, and I was calculated as 1,407 cubic yards.

TECHNICAL MEMORANDUM NO. 7
MONITORING WELL AND SAMPLING LOCATION SURVEY

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-029-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	Dave Hunsinger	**Date:**	August 13, 1991

SUMMARY OF ACTIVITIES PERFORMED

On July 8 and 9, 1991, Professional Service Industries, Inc. of Detroit Michigan (PSI) surveyed the monitoring well, boring, and sampling locations at the Stanley Tool facility in Fowlerville, Michigan. Elevations with respect to mean sea level were established for the top of each well casing, ground surface elevation for each well, and ground surface elevation for the sampling locations. A Topcon Automatic Level, Series 2000 was used to perform the elevation measurements.

The horizontal locations were located on an aerial survey map provided to PSI by Dames & Moore. A Topcon Automatic Level, Series 2000 and a 200-foot tape were used to layout the horizontal locations. The level was used to measure the angle from an existing structure to the survey location and the distance was taped. Each point was checked from two different locations. All locations were plotted on the aerial plan provided by Dames & Moore.

RFI PHASE II

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

SUMMARY OF ACTIVITIES PERFORMED

On February 7 and 8, 1994, Darryl Hughes & Associates of Fowlerville, Michigan surveyed the Phase II monitoring well, grid boring, and sludge sampling locations at the Stanley Tool facility in Fowlerville, Michigan. Elevations with respect to mean sea level were established for the top of each well casing, ground surface and ground surface elevation for the soil boring sampling locations. Horizontal locations were also determined by Darryl Hughes & Associates. A Wild T-1000/DI-1000 was used to perform the elevation and location measurements. All data were electronically stored in a Wild GRE-4 data collector.

The data points were downloaded from the Wild GRE-4 data collector to an IBM-compatible computer and plotted in Autocad V.12. The data points were then scaled and superimposed on a topographic base map created from aerial photographs.

TECHNICAL MEMORANDUM NO. 8
AQUIFER RESPONSE TESTING

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-029-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	David S. Hunsinger	**Date:**	July 24, 1991

AQUIFER RESPONSE TESTING PROCEDURES

Aquifer response tests were performed by Dames & Moore between May 2 and May 6, 1991 on all the monitoring wells installed by Dames & Moore except MW-G2, which was undergoing repairs at the time of testing. The tests were performed to estimate the hydraulic conductivity of the aquifer material beneath the Stanley site. A summary of hydraulic conductivities estimated from tests is presented in Table 4-5.

An instantaneous change in hydraulic head was achieved by sealing the top of the well casing and increasing the air pressure above the water using compressed nitrogen to produce a pneumatically induced head. Increased pressure in the well caused displacement of the water column to accommodate the added pressure. Theoretically, the aquifer responds by displacing 2.31 feet of water for every pound per square inch of increased air pressure (Prosser, 1981). Pressure is maintained until the aquifer re-equilibrates. Sudden release of the air pressure produces an instantaneous change in head.

The main components of the testing apparatus consisted of a cap assembly, a cylinder of compressed nitrogen gas, a pressure regulator, a pressure gauge, and a data logger and pressure transducer. The cap assembly had three main ports and formed an air tight seal over the well. The first port was an inlet through which pressurized nitrogen was introduced into the well casing. The pressure gauge was attached to the line leading into this port. The second port was an opening through which the pressure transducer extended down into the well, and the third port was an outlet to release the induced pressure in the well casing.

The apparatus was set up at each well, and the test began by inducing a precalculated pressure on the well. The pressure to be induced was determined by the height of the water column above the top of the screen and by the following correlation between water column height and pressure: a 33-foot column of water induces 1 atmosphere of pressure (Atm), and 1 Atm equals 14.7 pounds per square inch of pressure (psi); therefore, increasing the pressure in the well casing by 14.7 psi will displace the water in the well by 33 feet. The top of the water column could not be displaced below the top of the screen because nitrogen would then escape through the screen into the aquifer.

The water level was given adequate time to equilibrate with the induced pressure in the well casing, and then the data logger was zeroed and set so that recovery was measured as a positive displacement in feet. The logger, which took readings at a logarithmic rate for the first 10 minutes of the test, was started at the same moment the pressure was released from the well casing. After the first 10 minutes, the logger began taking readings at a constant rate of one measurement every one minute for the remainder of the test.

A model PTX-161/D submersible electronic pressure transducer connected to a HERMIT™ Model SE1000B environmental data logger was used to monitor the water level response to the instantaneous change in head. The data was downloaded from the data logger using a Macintosh Plus™ computer and MacTerminal™ software. Results of aquifer tests are presented in Appendix H.

AQUIFER TEST CALCULATIONS

A method described by Hvorslev (1951) for determining hydraulic conductivity of unconfined or confined aquifer, with completely or partially penetrating wells, was used to analyze aquifer test data.

This method assumes that the well is screened in an artesian aquifer of infinite thickness, or that the flow into or out of the tested aquifer does not sufficiently affect the ground water level in the aquifer. Appendix H contains the graphs used in the analysis of the tests. The graphs are a logarithmic plot of the head ratio versus a linear plot of time. From these graphs the basic time lag is derived and employed in the following calculation:

$$K_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8\,LT} \quad \text{for} \quad \frac{2mL}{D} > 4$$

K_h	=	Horizontal hydraulic conductivity
D	=	Screen diameter
d	=	Riser diameter
L	=	Screen length
m	=	Transformation ratio (assumed to be 1.0)
T	=	Basic time lag (time at which $H/H_0 = 0.37$)

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

AQUIFER RESPONSE TESTING PROCEDURES

Aquifer response tests were performed by Dames & Moore between February 15 and February 18 1994, on seven Phase II monitoring wells installed by Dames & Moore. Tests were performed on the four intermediate wells. Tests were not performed on newly installed shallow wells due to rapid recharge of the aquifer. Accordingly, drawdown measurements could not be obtained.

The hydraulic tests were performed to estimate the hydraulic conductivity of the aquifer material beneath the Stanley site. A summary of hydraulic conductivities estimated from tests performed on wells is presented in Table 4-6. A change in hydraulic head was achieved by purging the well with a pre-clean, dedicated bailer in order to lower the ground water level. The ground water level was measured periodically during purging to monitor the effect purging had on the water level. When the water level recharge rate and purging rate had stabilized, purging ceased and continuous water levels were measured and recorded during ground water recharge. Measurements were taken over longer periods of time as the recharge rate slowed.

AQUIFER TEST CALCULATIONS

A method for determining hydraulic conductivity of unconfined or confined aquifer with completely or partially penetrating wells, was used to analyze aquifer test date (Hvorslev, 1951).

This method assumes that the well has been screened in an artesian aquifer of infinite thickness, or that the flow into or out of the tested aquifer does not sufficiently affect the ground water level in the aquifer. Appendix H contains the graphs used in the analysis of the tests. The graphs are a logarithmic plot of the head ratio versus a linear plot

of time. From these graphs the basic time lag is derived and employed in the following calculation:

$$K_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8LT} \quad \text{for} \quad \frac{2mL}{D} > 4$$

K_h	=	Horizontal hydraulic conductivity
D	=	Screen diameter
d	=	Riser diameter
L	=	Screen length
m	=	Transformation ratio (assumed to be 1.0)
T	=	Basic time lag (time at which $H/H_o = 0.37$)

Aquifer response data for monitoring wells MW-E3 and MW-L1 were calculated using methods described by Bouwer and Rice (1976).

TECHNICAL MEMORANDUM NO. 9
MAGNETOMETER SURVEY

RFI PHASE I

Site:	Stanley Tools	**Job No.:**	03163-026-014
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	Anne Lundahl	**Date:**	December 13, 1990

SUMMARY OF TASKS PERFORMED

Two magnetometer surveys were conducted in the area near Solid Waste Management Units (SWMUs) B and C. The surveys were performed as a result of metallic containers uncovered on November 9, 1990, during an excavation around monitoring wells designated as MW-B1 and MW-B2. Three rusted and crushed containers were uncovered while preparing for the installation of a cement pad surrounding the wells.

The surveys were conducted to detect underground metals in the area using a metal detector Type TW-6, Serial Number 16820. The penetration depth of the detector is up to 15 feet dependent on soil conditions. A sensitivity control was used to set the magnitude of the response. The detector response was measured in arbitrary units on a scale from 0 to 100. A grid system was developed over the area by setting stakes at 5-foot intervals. The 5-foot-square grid sections were surveyed by establishing an origin at the intersections of the southern and western fencelines. The magnetic survey was then performed proceeding across the grid sections from south to north. The audible signal detected by the metal detection was recorded for each 5-foot-square grid section as the survey was performed. The technicians proceeded through the survey area using a sweeping motion across each grid section. The areas where metal was detected were staked off with survey tape. A map was then generated using the 5-foot-square grid system and recorded detection levels within each grid section (see Figure 3 of the *Buried Container Removal Plan* found in Appendix E).

The surveys were performed on the following two dates, using techniques described below:

- On November 12, 1990, a magnetic survey was conducted inside the fenceline in the area of Units B and C. The detector sensitivity scale was set at 3.5 by placing the detector directly over the drum at MW-B1 and MW-B2 and the detector was held approximately 1 foot above ground surface.

- On November 26, 1990, a magnetic survey was conducted on the west and south sides of the fence bordering Units B and C. The detector sensitivity scale was increased to 7 and held approximately 6 inches above ground surface.

During the magnetometer surveys, a previous fenceline was identified approximately 15 to 20 feet west of the present fenceline towards the Red Cedar River. The fenceline was broken down and partially buried, and may account for some of the readings detected along the perimeter of the area. It is possible that any container disposal may have occurred before the present fenceline was installed. This may account for the metal detections outside the present fenceline and extending to the previous fenceline.

Other random detections were encountered by the metal detector during the surveys. During other excavations onsite, scrap metal and hardware have been encountered. Detections near the southern fence appear to correspond with an abandoned weir that discharged to Unit I from Unit B when the units were operational.

TECHNICAL MEMORANDUM NO. 10
DITCH SAMPLING

RFI PHASE II

Site:	Stanley Tools	**Job No.:**	03163-045-121
Location:	Fowlerville, Michigan	**Client:**	The Stanley Works
By:	William Eckhoff	**Date:**	March 10, 1994

DITCH SAMPLING

Ditch sediment samples were collected on February 5, 1994 by Dames & Moore at three locations along northern and southern ditches at the Stanley site (Figure 3-5). Sampling proceeded from downstream to upstream locations. A composite sample was also collected from a mound of soil located south of Jackson Street, upgradient of the northern ditch.

At each sampling location, a sediment sample was collected from the center of the ditch at a depth of 6-inches. The sample was collected with a hand auger, and transferred into a new, aluminum foil-lined pan using a new, pre-cleaned stainless steel scoop. The sample was mixed with the scoop and placed in the corresponding sample containers provided by the laboratory. North ditch ("ND" series) and south ditch ("SD" series) sample descriptions are listed below.

Sample	Volume Collected (ounces)	Sample Description	Parameters Analyzed (see Table 5-4)
SE/ND-1/1	20	Black to gray, fine to medium sandy SILT with some clay	Protocol A
SE/ND-2/2	20	Black to gray, clayey SILT with some fine sand	Protocol A
SE/ND-3/1	20	Black, fine to coarse SAND with some gravel, silt, and clay	Protocol A
SE/ND-4/C	20	Brown to dark brown SAND with silt, clay, and gravel	Protocol A
SE/SD-1/1	20	Red to gray, fine to coarse SAND with humus and gravel	Protocol A
SE/SD-2/1	20	Dark brown to black SAND	Protocol A
SE/SD-3/1	20	Dark brown to black SAND	Protocol A

The samples were labeled and documented in accordance with the Quality Assurance/Quality Control (QA/QC) plan. All samples were stored in coolers maintained at approximately 4°C, and shipped via overnight courier to ENSECO-Rocky Mountain Analytical Laboratories (ENSECO).

DECONTAMINATION PROCEDURES

All sampling equipment was decontaminated prior to and following sample collection using the following steps.

- Warm water and Tri Sodium Phosphate (TSP) scrub
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Double distilled water rinse

TECHNICAL MEMORANDUM NO. 11
GROUNDWATER SAMPLING

RFI PHASE III

Site:	Former Stanley Tools Facility	**Job No.:**	20209-016-121
Location:	Fowlerville, Michigan	**Client:**	Johnson Controls, Inc.
By:	William Eckhoff	**Date:**	November 10, 2000

SUMMARY OF TASKS PERFORMED

Groundwater samples were collected by URS Corporation (URS) between June 13 and 16, 2000 from 21 previously installed monitoring wells. Sample identifications designated for these samples were the "GW" series. Monitoring well locations are shown on Figure 3-1 located in Section 3.0.

GROUNDWATER SAMPLING

All monitoring wells were checked for above ground damage and screened for organic vapors with an HNu photoionization detector (PID) upon opening (see Table 3-18). Prior to purging each well, the groundwater level and well depth were measured with a Solinst™ electronic water level indicator.

Purging and sampling of each well was performed using new disposable polyethylene (PE) bailers. The bailer was raised and lowered using a new length of braided nylon cord. Prior to sampling, a minimum of three well volumes was purged from each well. Periodic measurements of pH, specific conductance and temperature were made while purging until each parameter stabilized to within 0.25 pH units, 50 µmhos/cm and 1.0°F, respectively or five well volumes were purged. Sampling details and field parameters are presented on Table 5-2 located in Section 5.0. Groundwater samples collected from each well were immediatedly transferred to laboratory-supplied sample containers via the dedicated bailer. Care was taken not to aerate the sample.

All groundwater samples collected were analyzed for volatile organic compounds (VOCs). Selected wells (MW-A3, MW-C1, MW-C3, MW-F1, MW-F3, MW-F4, MW-F5, MW-J1, MW-J3, MW-J4, and MW-K1) were also analyzed for cyanide using methods to detect total cyanide and dissociable cyanide. Where applicable, groundwater samples were collected in containers with preservatives provided by the laboratory. The following is a list of analyzed parameters, the types of bottles used, and preservatives, in the order sampled.

Parameter	Container	Preservative
VOCs	three 40-mL glass	0.2 mL 50% HCl
Cyanide	one 1-L plastic	2 mL 50% NaOH

All samples were labeled with the site name, sample ID, time, date, preservatives, samplers signature, and required analytical method. Sample containers were stored in coolers maintained at approximately 4°C, and shipped via overnight courier Severn Trent Laboratory (STL) in Arvado, Colorado.

In addition to the required samples, QA/QC samples were collected during the Phase III RFI. Duplicate groundwater samples were collected at two wells (MW-C1, MW-F5) and matrix spike/matrix spike duplicate samples were collected from two wells (MW-A3, MW-K1) in accordance with the QA/QC plan (Task 4).

To evaluate the effectiveness of decontamination procedures, one field and two equipment blanks were collected. These include: GW/MW-A3/FB, GW/MW-K1/FB, and GW/MW-J3/EB. The field blank was collected by pouring distilled water directly from the shipping container to the laboratory-supplied bottles in vicinity of MW-J3. The two equipment blanks were collected after approximately 2 feet of braided nylon bailing cord was tied to an unused PE bailer. The bailer was then filled with distilled water and the equipment blank sample was collected by pouring the distilled water from the bailer into the laboratory-supplied containers. After each equipment blank was collected, the rope was removed from the bailer and a new piece of rope was attached to the top of the bailer. The bailer was then used for purging and sampling the well.

DECONTAMINATION PROCEDURES

Since each bailer used for groundwater sampling was an unused disposable PE bailer, no decontamination procedures were implemented. Equipment blanks were conducted to ensure that the bailers were produced and shipped free of any constituents that were being analyzed. All disposable sampling and personal protective equipment was double bagged and placed in a designated area onsite. If not disposable, personal protective equipment remained onsite during the course of field activities and was decontaminated prior to removal from the site.

TECHNICAL MEMORANDUM NO. 12

RFI PHASE III
SUBSURFACE SOIL SAMPLING AND GROUNDWATER SAMPLING
TCE SOURCE AREA INVESTIGATION

Site:	Former Stanley Tools Facility	**Job No.:**	20209-016-121
Location:	Fowlerville, Michigan	**Client:**	Johnson Controls, Inc.
By:	Stacey B. Lane	**Date:**	November 10, 2000

SUMMARY OF TASKS PERFORMED

The TCE source identification program for Phase III of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was conducted by URS Corporation (URS) between June 19, 2000 and July 14, 2000. During the course of field activities, the health and safety guidelines were followed as specified in *Task 7: Health and Safety Plan.* The URS site safety officer monitored activities of URS staff and subcontractor onsite at all times.

A total of 29 borings were installed in vicinity of and area between the following units: Unit K, Unit L, and Area of Concern (AOC) 1 (see Figures 3-1 and 3-2 located in Section 3.0 for boring locations). In the vicinity of Unit L there were 12 soil borings installed in a grid system pattern. Four soil borings were installed at evenly spaced intervals in the area between Unit L to the east and Unit K and AOC 1 to the west. In the vicinity of AOC 1 there were 6 soil borings installed. In the vicinity of Unit K there were 6 soil borings installed. One soil boring was installed to the west of AOC 1 and Unit K.

The soil and groundwater sampling strategy called for the installation of shallow borings with temporary piezometers to determine the absence or presence of contamination in the areas of the former units. Soil sampling was conducted during boring operations. Groundwater sampling was conducted after temporary piezometers had been allowed to recharge for up to 4 hours. A total of 18 investigative soil samples and 36 investigative groundwater samples, including five field duplicate groundwater samples, were submitted under chain of custody to Severn Trent Laboratories in Arvada, Colorado for analysis of volatile organic compounds (VOC) per SW-846 Method 8260. Laboratory results are summarized in Tables 5-4 and 5-5 located in Section 5.0.

The sample identifications designated for these samples are the "SO" series for soil samples and the "GW" series for groundwater samples. The identification indicated the media type of the sample, the investigation the sample pertained to, the boring within the sample grid, and the sample interval collected within the boring (e.g., SO-TCE1-4-5 and GW-TCE1-8-9). All Phase III drilling activities were performed by Belasco Drilling Services of Columbus, Ohio, under the direct supervision of URS.

DRILLING AND SAMPLING
SOIL AND GROUNDWATER

PREDRILLING ACTIVITIES

The locations of the shallow borings were proposed in the RFI Phase III Work Plan and approved by the U.S. EPA, Region 5 prior to the start of drilling. Some boring locations were moved due to access issues involving standing water. Other locations were either moved, omitted or added as the investigation proceeded to achieve the objective of characterizing the nature and extent of impact. The final locations were identified onsite with numbered stakes.

DRILLING EQUIPMENT

A truck-mounted direct push Simco Drill-Team Probe was used to advance all of the borings. The rig utilized 1-inch inside-diameter (ID) threaded steel pipes.

SAMPLING PROCEDURES

The direct push method with a 4-foot drive was used to sample the boring for physical analysis. The method consisted of driving 1.0-inch ID threaded steel pipes with an internal, acetate-lined, 48-inch long removable soil sampling device. At each location, the borehole was advanced to a depth between 10 and 22 feet below ground surface. In select borings, one soil sample from either impacted stratum or the stratum encountered directly above the water table was collected in the undisturbed linear samples. The soil samples were analyzed for properties summarized on Table 5-1 located in Section 5.0. At each boring location one groundwater sample was collected from either the bottom of the boring or from horizons of interest encountered during soil

sampling. The groundwater samples were analyzed for properties summarized in Table 5-1 located in Section 5.0.

Continuous subsurface soil sampling was performed at 4-foot intervals throughout the depth of each boring. After recovery, each sample sleeve was cut, placed on a table, opened, and immediately screened with a photoionization detector (PID), with an 11.7 eV probe. Readings were recorded on the log for that boring related to background readings. The soil samples were then evaluated for absence or presence of contamination based upon evidence of discoloration, chemical odor, and/or PID readings. If initial evaluations indicated possible presence of contamination, or if the soils were from the stratum directly above the water table, a soil sample was obtained for VOC analysis. Soil samples were then field classified and all pertinent drilling information recorded by a URS geologist (see boring logs located in Appendix C).

After the last sleeve sample was collected from a boring, the logs for that boring were consulted to choose the horizon for water sampling. Temporary piezometers were inserted into the borehole using ½-inch PVC piping joined with couplers, capped on the end and slotted in the lower one to two feet using a hacksaw. The PVC was pre-measured to stick up one foot above ground surface once lowered to the desired depth for obtaining a water sample. These piezometers were permitted to recharge for up to 4 hours. After recharge, a clean length of flexible PVC tubing was inserted into the piezometer to within a foot of the bottom. This was then attached to larger diameter flexible tubing that was hooked into a peristaltic pump. The pump was turned on and water was withdrawn until it was within two feet of the pump's tubing. Then the pump was shut off and the sample was obtained from the flexible PVC tubing via gravity drainage. If a complete sample was not obtained on the first attempt, subsequent attempts were made until either the vials were filled, or the borehole ceased to yield water. Upon obtaining the ground water sample, all temporary piezometers were removed and their respective boreholes were filled with bentonite chips.

The soil samples collected for chemical analysis were obtained by filling three EnCoreσ samplers and one four ounce glass jar with a Teflon™ lid per sample. The groundwater samples were obtained by filling three 40-milliliter glass vials with Teflon™ lids per sample. All lids were tightened firmly prior to being labeled and packed into coolers with ice.

Clean nitrile gloves were worn at all times during sample handling. The samples were labeled and documented in accordance with the QA/QC plan (Task 4). All samples were stored at 4°C and then shipped in coolers via overnight courier to the laboratory.

DECONTAMINATION PROCEDURES

All drilling equipment was steam cleaned prior to handling a new boring. A new sampling sleeve was used for each new sampling interval. All other sampling equipment, including PVC and tubing, was dedicated to each sample location. If not disposable, personal protective equipment remained onsite during the course of field activities, and was decontaminated prior to site removal.

DRILL CUTTINGS AND PURGE WATER MANAGEMENT

Materials accumulated during soil boring activities were placed in Department of Transportation (DOT) approved containers (55-gallon drums). The containers were marked with the date the drum was filled, with a description of the drum contents, with the job number and with the site location. The containerized wastes were assembled in a secure area onsite for temporary storage while awaiting characterization and profiling for disposal authorization.

TECHNICAL MEMORANDUM NO. 13
RED CEDAR RIVER and SOUTH DITCH SEDIMENT SAMPLING

RFI PHASE III

Site:	Former Stanley Tools Facility	**Job No.:**	20209-016-121
Location:	Fowlerville, Michigan	**Client:**	Johnson Controls, Inc.
By:	Chris Speelman	**Date:**	November 9, 2000

SUMMARY OF TASKS PERFORMED

Sediment and soil bank samples were collected by URS Corporation (URS) between September 7 and September 9, 2000 from 17 locations along the south ditch and the Red Cedar River. The sediment samples included four locations along the south ditch of the facility and 13 locations along the Red Cedar River. Riverbank soil samples were collected adjacent to 5 selected river sediment locations along the Red Cedar River. All sample identifications designated for the sediment samples are prefixed with "SE." Riverbank soil samples were designated with a "SO" prefix. Sediment sample locations (present and historic) on or adjacent to the facility are shown on Figure 3-3 and those collected offsite are presented on Figure 3-4.

RED CEDAR RIVER SEDIMENT AND SOIL SAMPLING

River sediment/soil sampling commenced with river locations adjacent to the facility (between Grand River Avenue and the railroad tracks bordering the facility to the south) and these were collected generally from downstream to upstream. The next sample locations collected were north of Grand River Avenue advancing in a downstream direction. The river sediment/soil sampling was concluded with the collection of the two locations upstream of the facility (RC-24 and RC-25).

Mr. William Hopkins, of Tech Law, Inc. of Chicago, Illinois, and Mr. Juan Thomas, of USEPA Region 5, were on-site September 7 and 8, to provide project oversight during the sampling activities.

Sediment sampling data sheets and river sedimentation profiles are attached to this memorandum.

Riverbank Sampling

At sampling locations RC-14, RC-21, RC-22A, RC-23, and RC-25, a riverbank soil sample was collected. These sampling locations were chosen with input from Mr. Thomas and were biased towards areas of soft, highly organic soil or areas that were potentially impacted by site activities. The sample was collected from the surface of each location using a stainless steel spoon. This spoon was properly decontaminated, in accordance with the Quality Assurance/Quality Control (QA/QC) plan (Task 4), just prior to sample collection and between each sample location. Once collected in the spoon, the sample was placed directly into the pre-labeled, laboratory-supplied containers.

Each sample was labeled and documented in accordance with QA/QC plan. All samples were stored in coolers that were maintained at approximately 4°C, and were shipped via overnight courier to Severn Trent Laboratory (STL) in Arvada, Colorado.

Sediment Sampling

Sediment samples were collected from the locations RC-14 through RC-25 (including RC-22A) and are illustrated in Figures 3-3 and 3-4 from Section 3.0. At most locations, a sedimentation profile of the river was obtained prior to sample collection. This profile illustrates the river width and included measurements of water depth and sediment thickness at 5-foot intervals. These measurements were performed with an incremented 3-foot probe that was lowered to the top of sediment for water depth and then inserted into the sediment until refusal, in order to determine sediment thickness. Sediment samples were then located with bias towards areas of thicker sediment. Copies of the river profiles are attached to this memorandum.

Up to two samples were collected from each sampling location, one from 0 to 6-inches, and one below 6 inches. The sampling team approached each sampling location from downstream. At locations where a deeper sample was collected, a PVC pipe was driven into the sediment to serve as an "outer casing". This pipe served two purposes. First, it marked the sample location to ensure that the deep sample was taken from the same

location as the shallow sample. Second, this casing prevented the sampling hole from filling up with sediment in the time between sampling the shallow interval and the deeper interval. Each sample was collected using a decontaminated, stainless steel, 4-inch diameter hand auger. After the hand auger was advanced to the appropriate depth, the auger was removed from the hole and the sample was placed into a decontaminated stainless steel bowl. The sample was then logged and documented prior to homogenization with a decontaminated stainless steel spoon. The sample was then transferred to the pre-labeled, laboratory supplied, sampling containers.

Each sample was labeled and documented in accordance with QA/QC plan. All samples were stored in coolers that were maintained at approximately 4°C, and were shipped via overnight courier to Severn Trent Laboratory (STL) in Arvada, Colorado.

SOUTH DITCH SEDIMENT SAMPLING

Sediment samples SD-4, SD-5, SD-5A, and SD-6 were collected in the south ditch at the locations illustrated in Figure 3-4 located in Section 3.0. These locations were selected in an attempt to mimic the south ditch sediment sampling locations from the Phase II RCRA Facility Investigation (RFI) but also to test areas selected as having the greatest potential to hold contaminants. South ditch samples were collected in a downgradient direction from locations SD-6 to SD-4.

A sample from 0 to 6-inches and a sample from 6 to 12-inches were collected at each sampling location. A decontaminated, stainless steel, 4-inch diameter hand auger was used to collect the samples. After the hand auger was advanced to the appropriate depth, the auger was removed from the hole and the soil sample placed into a decontaminated, stainless steel bowl. The sample was then homogenized with a decontaminated, stainless steel spoon. The sample was then placed into the pre-labeled laboratory supplied jars.

Each sample was labeled and documented in accordance with QA/QC plan. All samples were stored in coolers that were maintained at approximately 4°C, and were shipped via overnight courier to Severn Trent Laboratory (STL) in Arvada, Colorado.

DECONTAMINATION PROCEDURES

All sampling equipment was decontaminated prior to and following each sample location using the following steps.

- Distilled water and Alconox™ scrub
- Distilled water rinse
- Two percent (by volume) nitric acid and distilled water rinse
- Double distilled water rinse

The hand auger and all other stainless steel equipment used for sampling was decontaminated before and after each sampling location. All equipment was wrapped in aluminum foil for transportation from the decontamination area to the next sampling location. All disposable sampling and personal protective equipment was bagged and placed in a designated area onsite.

APPENDIX F

APPENDIX F

BORING LOGS

PHASE I/II BORING LOGS

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/16/91: ≥ 0.2 ppm Ground surface elevation: 886.22 feet, msl
0	(A)	22	<1		Brown fine to medium SAND with some silt and roots, medium dense, wet (FILL)
1					grades without roots at 0.6 feet grades to moist at 0.8 feet
2		5	<1		Greenish-gray medium to coarse sandy CLAY with some silt, fine gravel, black mottling and metallic and humus material, medium stiff, very moist (FILL)
3					
4		2	<1		grades with 6-inch seam of medium to coarse sand at 3.5 feet
5	(A)	1	<5		Bluish-green SLUDGE with bronze, olive, rust and metallic gray laminations, soft, very moist grades to black at 5.3 feet (strong kerosene-like odor)
6					Boring completed at 6.0 feet on 4/16/91. Boring grouted to surface with cement/bentonite grout on 4/16/91. Water level in borehole recorded at 4.3 feet upon boring completion on 4/16/91.
7					

LEGEND:

Split Spoon Sample

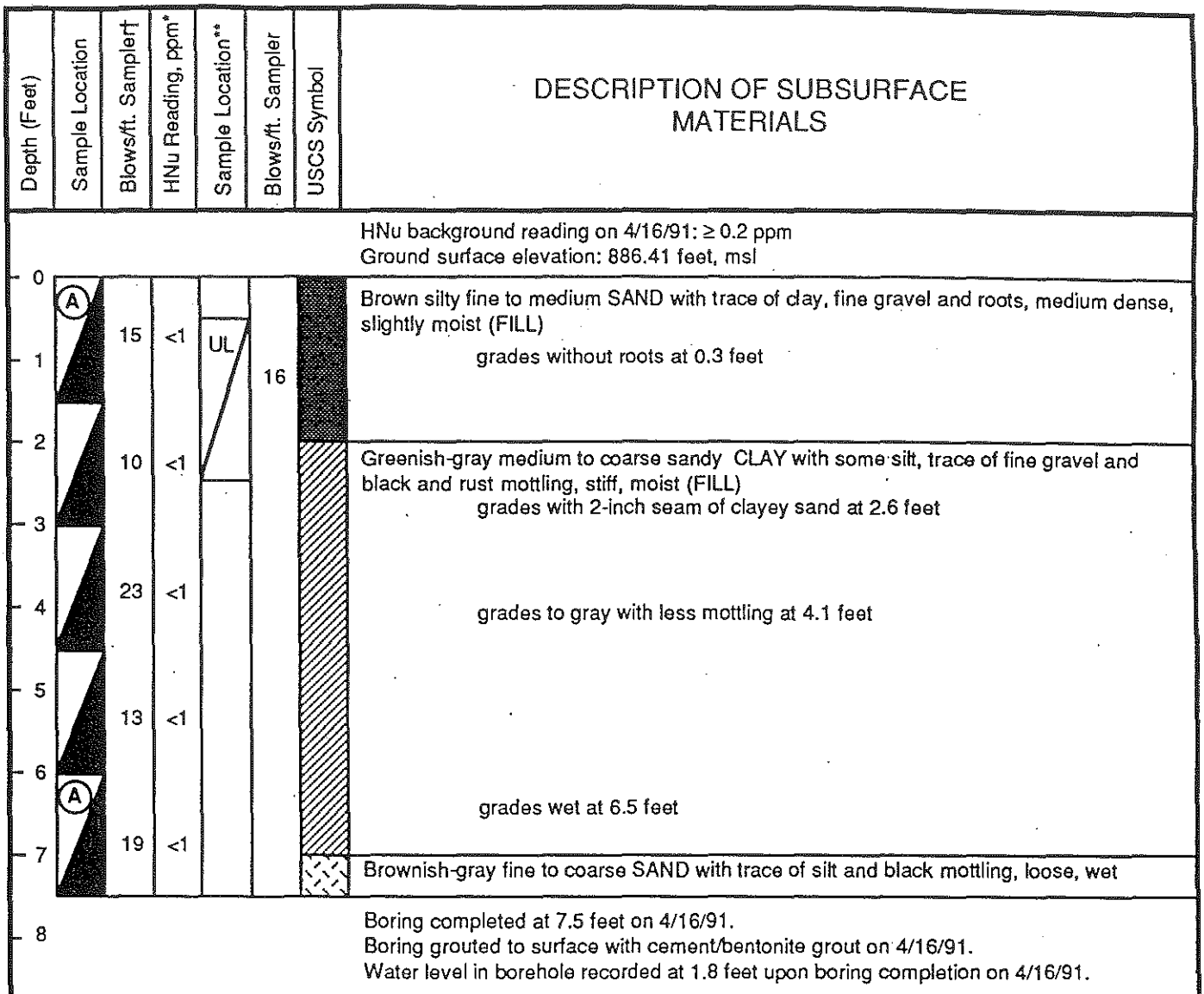
(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
B-1



LEGEND:

Split Spoon Sample

UL — Undisturbed Liner Sample

(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.
** Sample collected for physical analysis using Standard PenetrationTest (SPT).

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	BORING B-2

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/17/91: ≥ 0.1 ppm Ground surface elevation: 886.89 feet, msl
0					Brown fine to medium SAND with some silt, fine gravel and trace of clay, medium dense, moist (FILL)
1		24	<1		
2	A	16	<1		grades with coarse sand, some clay and black and green mottling at 1.7 feet, slightly moist (slight kerosene-like odor)
3					Dark gray fine to medium sandy CLAY with trace of silt and fine gravel, and black and olive-green mottling, stiff, very moist (FILLI)
4		15	<1		
5		17	<1		
6	A				grades with red mottling
7		19	8		Tannish-black fine to coarse SAND with trace of silt and black mottling, loose, wet (kerosene-like odor)
8					Boring completed at 7.5 feet on 4/17/91. Boring grouted to surface with cement/bentonite grout on 4/17/91. Water level in borehole recorded at 4.2 feet upon boring completion on 4/17/91.

LEGEND:

Split Spoon Sample

(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
B-3

Depth (Feet)	Sample Location	Blows/ft. Sampler	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/16/91: ≥ 0.2 ppm Ground surface elevation: 886.98 feet, msl
0	(A)				Tannish-brown silty fine to medium SAND, loose, moist (FILL)
1		9	<1		
2					
3		10	<1		grades to wet at 3.0 feet grades to black with sludge residue and metallic shavings at 3.11 feet
4	(A)				
5		7	<1		
6					Greenish-black clayey fine to coarse SAND with some silt and fine gravel
					Boring completed at 6.0 feet on 4/16/91. Boring grouted to surface with cement/bentonite grout on 4/16/91. Water level in borehole recorded at 3.8 feet upon boring completion on 4/16/91.
7					

(A) Sample Selected for Laboratory Analysis

LEGEND:

Split Spoon Sample

(A) Soil from 0-3 Feet and 3-6 Feet Composited as Two Analytical Samples

* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

BORING B-4

Depth (Feet)	Sample Location	Blows/ft. Sampler	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/16/91: ≥ 0.2 ppm Ground surface elevation: 886.47 feet, msl
0	(A)				Brown fine to medium SAND with some silt and roots (medium dense; moist) (fill)
1		20	<1		grades to wet at 1.0 feet
2					grades with coarse sand at 1.5 feet grades without coarse sand at 1.8 feet
3		3	<1		
4	(A)				grades with black mottling and metallic filings at 3.8 feet
5		1	<1		
6					Bluish-green SLUDGE with black and yellow laminations (soft; moist)
7					Boring completed at 6.0 feet on 4/16/91. Boring grouted to surface with cement/bentonite grout on 4/16/91. Water level in borehole recorded at 1.8 feet upon boring completion on 4/16/91.

LEGEND:

Split Spoon Sample

(A) Soil from 0-3 Feet and 3-6 Feet Composited as Two Analytical Samples

* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

BORING B-5

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	Sample Location**	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
							HNu background reading on4/16/91: ≥ 0.2 ppm Ground surface elevation: 887.09 feet, msl
0	A	9	<1	UL	13		Tannish-brown silty fine to medium SAND, loose, moist (FILL)
1							
2							
3		5	<1				grades wet at 3.2 feet
4	A						
5		1	<1				Greenish-blue sludge with some sand, wet
6							Boring completed at 6.0 feet on 4/16/91. Boring grouted to surface with cement/bentonite grout on 4/16/91. Water level in borehole recorded at 3.3 feet upon boring completion on 4/16/91.
7							

LEGEND:

- Split Spoon Sample
- UL — Undisturbed Liner Sample
- (A) — Soil from 0-3 Feet and 3-6 Feet Composited as Two Analytical Samples

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.
** Sample collected for physical analysis using Standard Penetration Test (SPT).

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	BORING B-6

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.43 feet, msl
0						Brown medium to coarse SAND with clay and silt, medium dense, moist
1		10	100	<1		
2						
3		3	83	<1		grades loose and moist to wet at 3.0 feet
4						
5		4	92	<1		grades darker brown with black streaks at 5.6 feet
6						grades gray at 6.2 feet
7		2	100	<1		Bluish-green SLUDGE at 6.8 feet
8	*	4	100	10.4		Black with gray SAND with petroleum odor at 8.8 feet
9						Boring completed at 9.0 feet on 1/23/94. Boring grouted to surface with cement/bentonite grout on 1/23/94.
10						

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

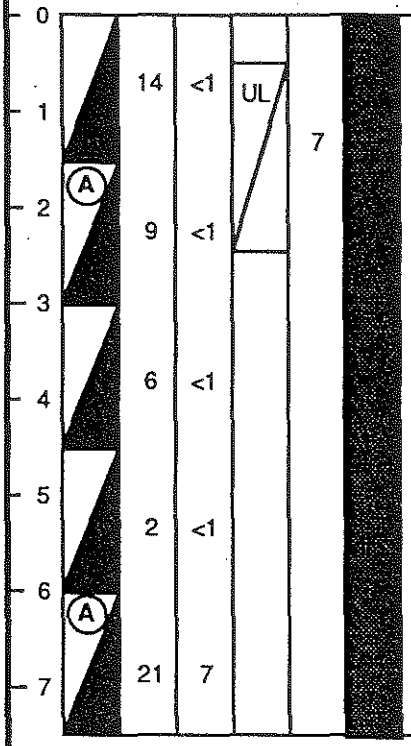
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
B-7



DESCRIPTION OF SUBSURFACE MATERIALS

HNu background reading on4/16/91: ≥ 0.2 ppm
Ground surface elevation: 886.79 feet, msl

Brown fine to medium SAND with some silt, trace of clay and roots, medium dense, slightly moist (FILL)

grades without roots at 0.5 feet, loose, moist

grades wet at 2.5 feet

grades to fine to medium silty sand at 3.5 feet

grades to gray with black mottling at 3.7 feet (kerosene-like odor)

grades with 4-inch seam of sandy clay at 6.0 feet

grades to black at 7.0 feet (strong kerosene-like odor)

Boring completed at 7.5 feet on 4/17/91.
Boring grouted to surface with cement/bentonite grout on 4/17/91.
Water level in borehole recorded at 3.5 feet upon boring completion on 4/17/91.

LEGEND:

Split Spoon Sample

UL — Undisturbed Liner Sample

(A) — Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.
** Sample collected for physical analysis using Standard PenetrationTest (SPT).

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
C-1

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/18/91: ≥ 0.2 ppm Ground surface elevation: 886.94 feet, msl
0					Brown fine SAND with trace of silt, medium dense, moist (FILL)
1		18	<1		
	A				grades to reddish-brown at 1.6 feet
2		20	<1		
3					
4		15	<1		
					Gray CLAY with fine sand and fine gravel with black mottling, medium stiff, moist (kerosene-like odor)
5		3	5		
					grades wet at 6.0 feet
6	A				grades with 2-inch seam of medium sand at 6.4 feet
7		8	6		
8					Boring completed at 7.5 feet on 4/18/91. Boring grouted to surface with cement/bentonite grout on 4/18/91. Water level in borehole recorded at 1.5 feet upon boring completion on 4/18/91.

LEGEND:

Split Spoon Sample

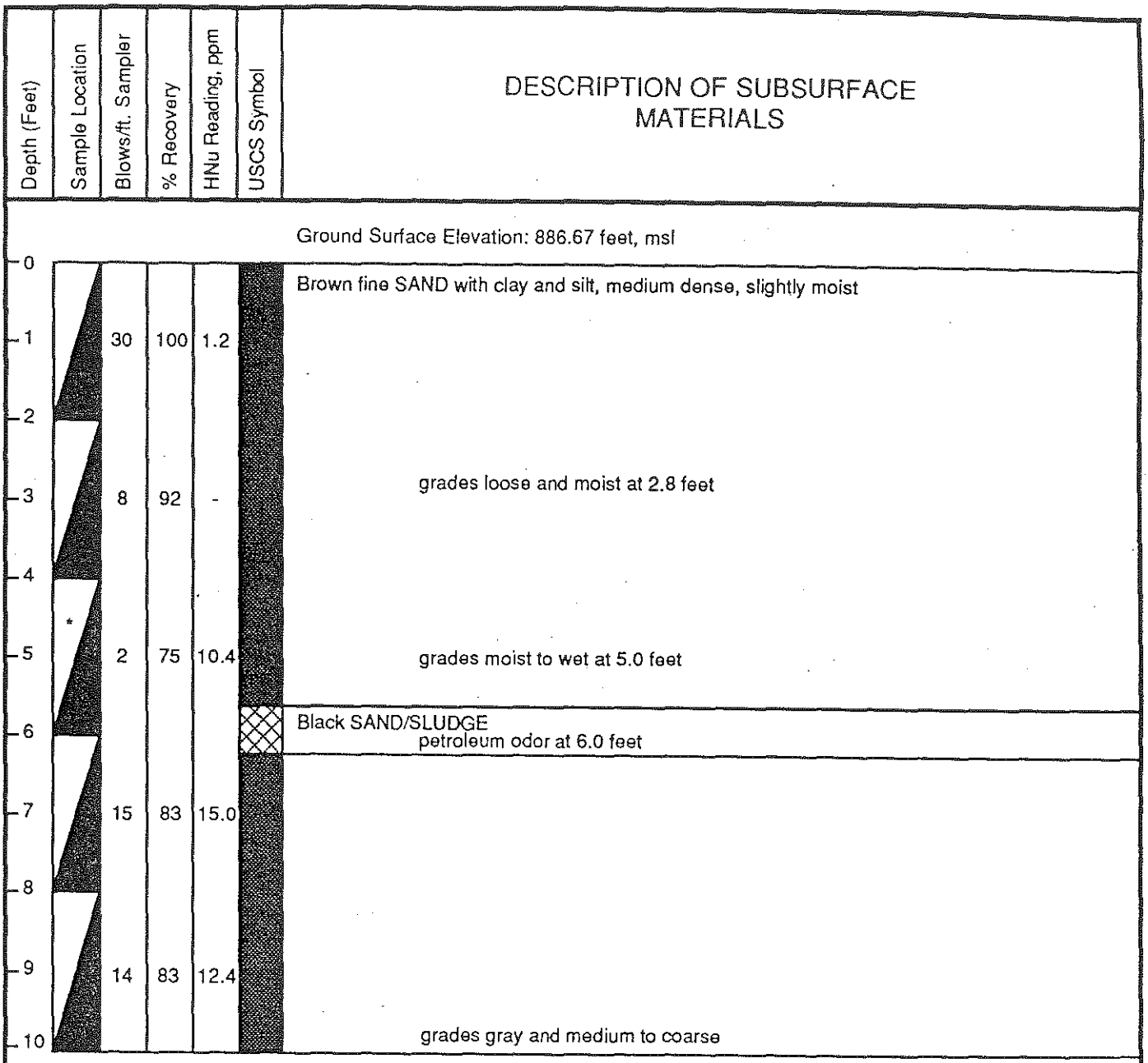
(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
C-2



LEGEND:

Split Spoon Sample

\- Not Recorded

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
C-3

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	Sample Location**	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
							HNu background reading on4/18/91: ≥ 0.2 ppm Ground surface elevation: 886.19 feet, msl
0	A	14	4	UL	12		Reddish-brown silty fine to medium SAND with trace of fine gravel and rust and black mottling, medium dense, slightly moist (FILL)
1							
2		17	<1				grades with clay at 1.9 feet
3							
4		6	2				
5	A	23	6				grades to black with trace of gravel at 5.0 feet (strong kerosene-like odor) grades wet at 5.5 feet
6							Black SLUDGE, very stiff, very moist (strong kerosene-like odor)
7							Boring completed at 6.0 feet on 4/18/91. Boring grouted to surface with cement/bentonite grout on 4/18/91. Water level in borehole recorded at 5.5 feet upon boring completion on 4/18/91.

LEGEND:

- Split Spoon Sample
- UL — Undisturbed Liner Sample
- (A) — Sample Selected for Laboratory Analysis

†Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.
** Sample collected for physical analysis using Standard PenetrationTest (SPT).

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
E-1

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/18/91: ≥ 0.2 ppm Ground surface elevation: 885.60 feet, msl
0	(A)	13	<1		Reddish-brown fine to medium SAND with some silt, trace of fine gravel and rust and black mottling medium dense, slightly moist (FILL)
1					
2		3	<1		grades moist at 1.9 feet
3					
4		4	<1		grades without gravel at 3.9 feet, wet
5	(A)	31	1		
6					Boring completed at 5.75 feet on 4/18/91. Boring grouted to surface with cement/bentonite grout on 4/18/91. Water level in borehole recorded at 4.2 feet upon boring completion on 4/18/91.

LEGEND:

Split Spoon Sample

(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
E-2

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.34 feet, msl
0						Light brown to gray fine to medium SAND with some silt and clay
1		11	83	<1		
2						grades with less silty clay and slightly moist
3		10	83	4.0		
4						grades to gray with more silt and clay and petroleum odor at 4.0 feet, moist
5	*	18	92	17		grades with strong petroleum odor and black sludge
6						grades to green with silt and clay
7		18	75	<1		Light gray fine to medium sandy CLAY with some silt, medium stiff, moist
8						

Boring completed at 8.0 feet on 2/3/94.
Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
E-3

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	Sample Location**	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
							HNu background reading on4/18/91: ≥ 0.2 ppm Ground surface elevation: 885.32 feet, msl
0	(A)	11	<1	UL	17		Reddish-brown silty fine to medium SAND with fine to large gravel and black and rust mottling, medium dense, slightly moist (FILL)
1							grades with trace of clay at 1.0 feet
2		24	<1				grades with clay at 1.5 feet, moist grades without clay at 2.5 feet
3							
4		13	<1				
5	(A)	28	<1				grades to fine to coarse sand with some silt at 5.5 feet, dense, wet
6							Boring completed at 6.0 feet on 4/18/91. Boring grouted to surface with cement/bentonite grout on 4/18/91. Water level in borehole recorded at 4.0 feet upon boring completion on 4/18/91.
7							

LEGEND:

Split Spoon Sample

UL — Undisturbed Liner Sample

(A) — Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.
** Sample collected for physical analysis using Standard PenetrationTest (SPT).

Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

BORING
J-1

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/19/91: ≥ 0.2 ppm Ground surface elevation: 886.77 feet, msl
0	A				Reddish-brown fine to medium SAND with silt, medium dense, slightly moist (FILL)
1		12	4		
2		15	4		grades with black mottling at 1.7 feet, moist grades to brownish-black at 2.5 feet
3					grades to reddish-brown with black mottling at 3.0 feet grades with wood chips at 3.4 feet
4		8	21		
5	A	4	19		grades wet at 5.6 feet
6					grades to black at 5.9 feet
7					Boring completed at 6.0 feet on 4/19/91. Boring grouted to surface with cement/bentonite grout on 4/19/91. Water level in borehole recorded at 3.8 feet upon boring completion on 4/19/91.

LEGEND:

Split Spoon Sample

(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
J-2

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	Sample Location**	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
							HNu background reading on4/22/91: ≥ 0.2 ppm Ground surface elevation: 888.34 feet, msl
0	A						SAND and GRAVEL (fill)
1		26	<1	UL	20		Greenish-gray clayey fine to coarse SAND with some fine gravel and black and rust mottling, stiff, dry
2		16	0.3				grades moist with more fine gravel at 2.4 feet
3							
4		6	0.4				
5	A	6	0.4				grades very moist at 5.0 feet (slight petroleum-like odor) grades wet at 5.2 feet
6							Boring completed at 6.0 feet on 4/22/91. Boring grouted to surface with cement/bentonite grout on 4/22/91. Water level in borehole recorded at 5.2 feet upon boring completion on 4/22/91.
7							

LEGEND:

Split Spoon Sample

UL — Undisturbed Liner Sample

(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.
** Sample collected for physical analysis using Standard PenetrationTest (SPT).

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
K-1

Depth (Feet)	Sample Location	Blows/ft. Sampler†	HNu Reading, ppm*	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					HNu background reading on 4/22/91: ≥ 0.2 ppm Ground surface elevation: 888.67 feet, msl
0	A	27	<1		Reddish-brown fine to coarse SAND with some silt and fine to coarse gravel, medium dense, slightly moist
1					
					grades without coarse gravel at 1.5 feet
2		15	0.3		
					grades with coarse gravel at 2.6 feet
3	A				
		20	0.4		
4					
					grades very moist at 4.6 feet (slight odor)
5		21	-		grades wet at 5.0 feet
6					
					Boring completed at 6.0 feet on 4/22/91. Boring grouted to surface with cement/bentonite grout on 4/22/91. Water level in borehole recorded at 5.0 feet upon boring completion on 4/22/91.
7					

LEGEND:

Split Spoon Sample

\- Not Measured

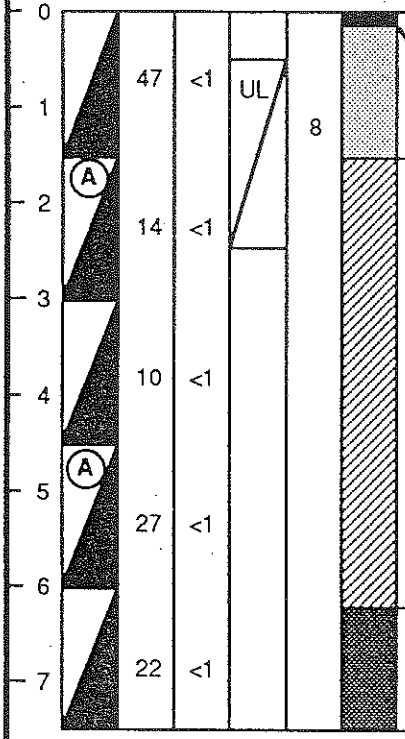
(A) Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

BORING
K-2



DESCRIPTION OF SUBSURFACE MATERIALS

HNu background reading on4/22/91: ≥ 0.2 ppm
Ground surface elevation: 888.78 feet, msl

Black ASPHALT

Reddish-brown fine SAND with trace of fine to medium gravel, medium dense, slightly moist

Dark brown silty CLAY with fine sand and black and rust mottling, medium stiff, slightly moist

grades to greenish-gray with fine to coarse sand, trace of silt and fine to medium gravel at 2.5 feet, medium stiff, moist

grades to brown with gray mottling at 4.2 feet, stiff

Brown silty fine to medium SAND with trace of clay, medium stiff, wet

Boring completed at 7.5 feet on 4/22/91.
Boring grouted to surface with cement/bentonite grout on 4/22/91.
Water level in borehole recorded at 3.1 feet upon boring completion on 4/22/91.

LEGEND:

Split Spoon Sample

UL — Undisturbed Liner Sample

(A) — Sample Selected for Laboratory Analysis

† Sampler in use is a 3 inch ID split spoon.
* HNu reading taken directly over split-spoon immediately upon opening.
** Sample collected for physical analysis using Standard PenetrationTest (SPT).

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	BORING L-1

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.89 feet, msl
0						Mottled yellowish-brown to dark brown silty CLAY with trace of fine to coarse sand and fine gravel and roots, dry to moist
1		17	67	2.2		
2						grades to black at 1.6 feet grades softer with wood particles
3		1	29	<1		
4	*					grades with less fine to coarse sand and without gravel from 4.0 to 4.5 feet grades to greenish-gray with fine to coarse sand with silt and trace of fine gravel, dense, moist
5		5	83	<1		
6						grades soft from 5.8 to 6.4 feet
						Gray silty fine to coarse SAND with some clay and trace of fine to coarse gravel, loose, moist to wet
7		15	75	<1		grades to more sorted from 7.0 to 7.6 feet
8						

Boring completed at 8.0 feet on 1/24/94.
Boring grouted to surface with cement/bentonite grout on 1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-1

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 882.43 feet, msl
0						
1		20	58	<1		Brown to black silty CLAY with fine to coarse sand, fine gravel and cement particles, dry (FILL)
2	*					
3		5	58	<1		Greenish-gray fine to medium sandy SILT with black streaks, stiff, moist grades with fine to coarse sand layers with trace of clay at 2.5 and 2.9 feet grades wet at 3.8 feet
4						
5		9	58	<1		Dark gray fine to medium SAND with some silt with trace of coarse sand, loose, wet grades to gray at 5.6 feet
6						

Boring completed at 6.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on 1/25/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-2

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 881.99 feet, msl
0						
1		4	29	<1		Black SILT
2	*					
3		4	67	<1		Mottled yellowish-brown to gray with black fine to medium SAND with silt, dense, moist to wet grades wet at 3.5 feet grades to gray at 3.8 feet
4						
5		8	92	<1		
6						Brownish-yellow fine sandy SILT

Boring completed at 6.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on 1/25/94.

LEGEND:

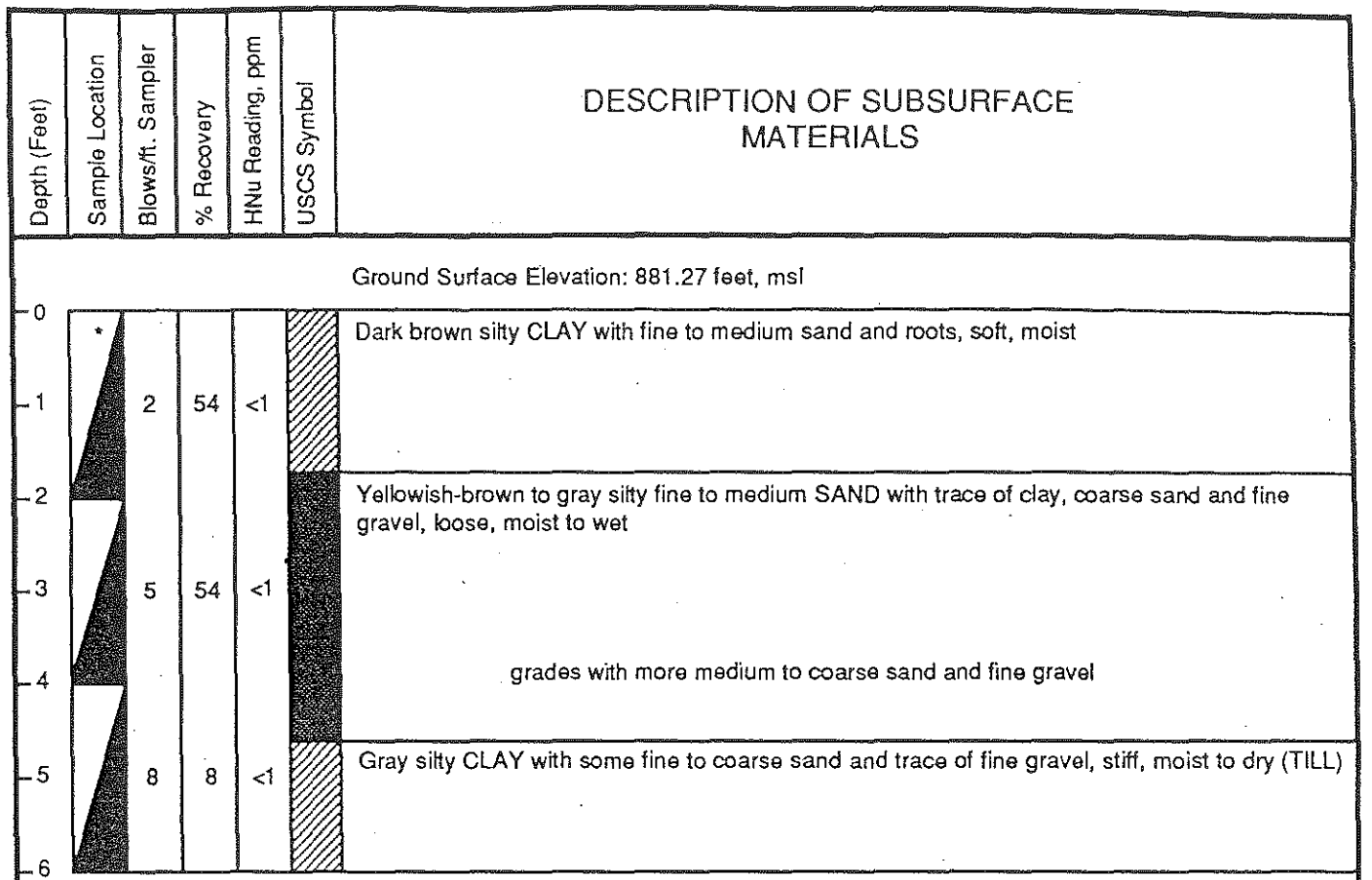
Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-3



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-4

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 881.92 feet, msl
0	*	1	29	<1		Dark brown silty CLAY with trace of fine to medium sand and roots, soft, moist
1						
2						
3		3	75	<1		Mottled yellowish-brown to gray fine to medium silty SAND with trace of clay and fine gravel, loose, moist to wet grades with silty clay seam at 3.8 feet
4						Mottled yellowish-brown to gray silty CLAY with trace of fine to coarse sand and fine gravel, stiff, moist (TILL)
5		8	83	-		grades to gray at 5.8 feet
6						Boring completed at 6.0 feet on 2/3/94. Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

- Split Spoon Sample
- \- Not Recorded
- * Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-5

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 882.36 feet, msl
0	*	2	50	<1		Mottled brown to brownish-yellow silty CLAY with trace of fine to medium sand and roots, soft, dry to moist
1						
2						
3		2	12	<1		grades with more fine to coarse sand
4						
5		6	71	<1		grades with more silt and gravel
6						Gray silty fine to coarse SAND with trace of clay and fine to medium gravel, dense, moist to wet
						Boring completed at 6.0 feet on 2/3/94. Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

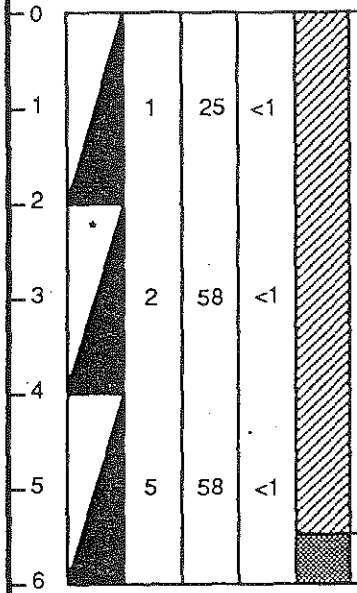
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-6



DESCRIPTION OF SUBSURFACE MATERIALS

Ground Surface Elevation: 882.95 feet, msl

Brown silty CLAY with fine to medium sand with roots, soft, moist

grades with whitish-tan seam at 2.3 feet

grades reddish-brown with trace of coarse sand and fine gravel

grades to gray at 4.3 feet
grades wet at 4.8 feet

Gray silty fine to coarse SAND with fine gravel, loose, wet

Boring completed at 6.0 feet on 2/3/94.
Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-7

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 884.53 feet, msl
0	*	5	96	<1		Dark brown silty CLAY with fine to medium sand and trace of coarse sand and roots, stiff, moist
1						
2						grades with more fine to medium sand
3		7	50	<1		grades with more silt from 3.0 to 4.7 feet
4						
5		8	58	<1		Yellowish-brown silty fine to medium SAND with coarse sand and fine gravel, loose, moist
6						
						Boring completed at 6.0 feet on 2/3/94. Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-8

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 884.02 feet, msl
0	*	5	42	<1		Dark brown silty CLAY with trace of fine to medium sand and fine gravel, medium stiff, moist
1						
2		4	42	<1		Mottled reddish-brown to gray clayey SILT with fine to coarse sand and trace of fine gravel, soft, moist
3						
4						grades with more fine to medium sand from 3.9 to 4.0 feet
5		6	50	<1		grades mottled gray with brown
6						Boring completed at 6.0 feet on 2/1/94. Boring grouted to surface with cement/bentonite grout on 2/1/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-9

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 884.15 feet, msl
0	*					Dark brown silty CLAY with fine to medium sand with roots, soft, moist
1		3	67	<1		
2						grades mottled yellowish-brown to gray with medium to coarse sand and fine gravel, stiff
3		4	58	<1		
4						
5		9	58	<1		grades to gray
6						Boring completed at 6.0 feet on 2/3/94. Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-10

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.57 feet, msl
0	*	1	75	<1		Dark brown clayey SILT with fine to medium sand and roots, soft, moist
2		4	75	<1		Mottled yellowish-brown to gray silty CLAY with fine to coase sand and trace of fine gravel, very stiff, moist to dry (TILL)
4		7	75	<1		grades to gray from 3.5 to 4.0 feet grades to yellow with more fine sand grades more brown, soft and moist to wet from 4.0 to 4.3 feet grades to gray with more silty clay, fine to coase sand and trace of fine gravel, stiff and moist to dry at 4.3 feet
6						Boring completed at 6.0 feet on1/28/94. Boring grouted to surface with cement/bentonite grout on1/28/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

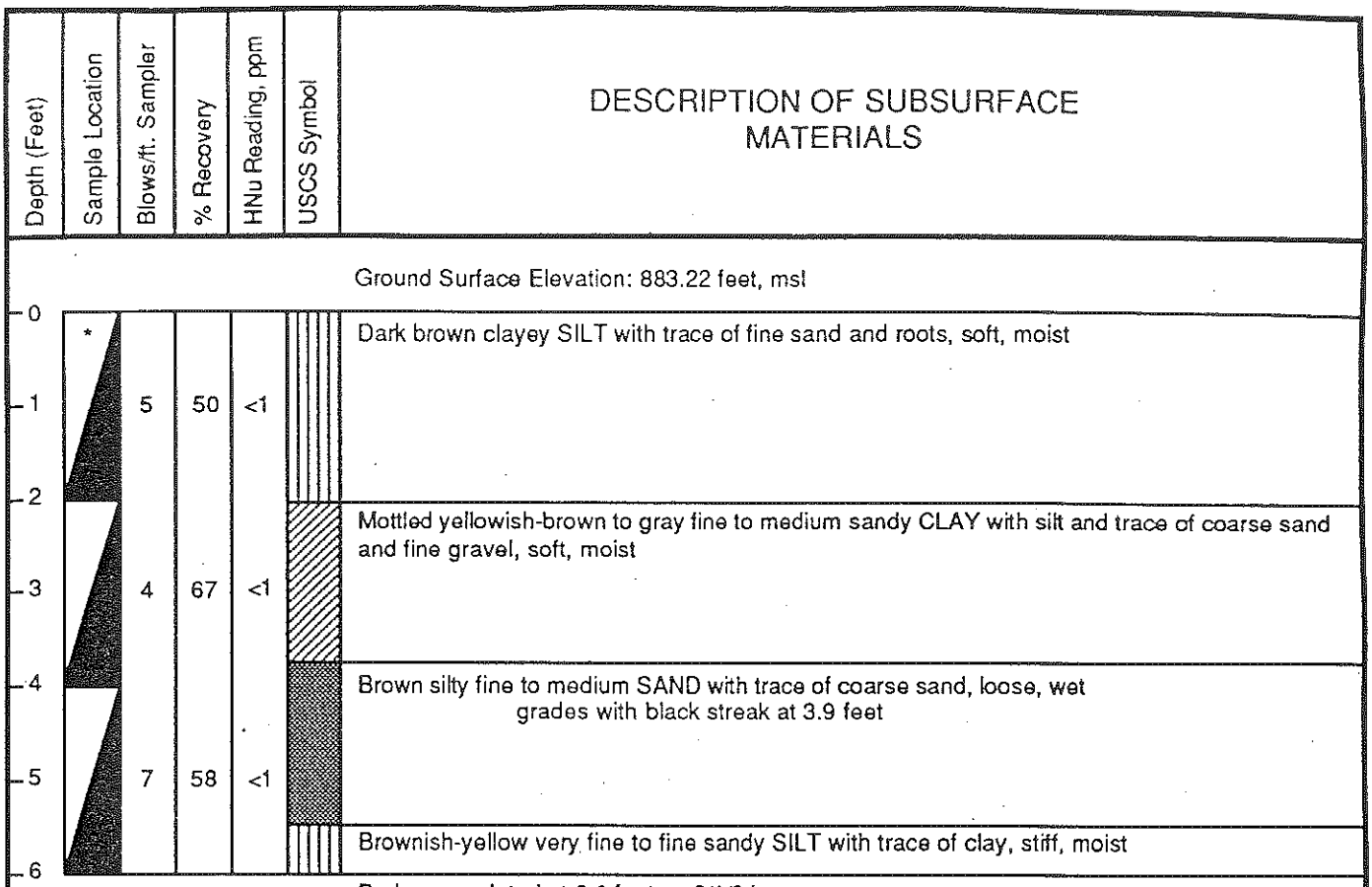
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-11



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

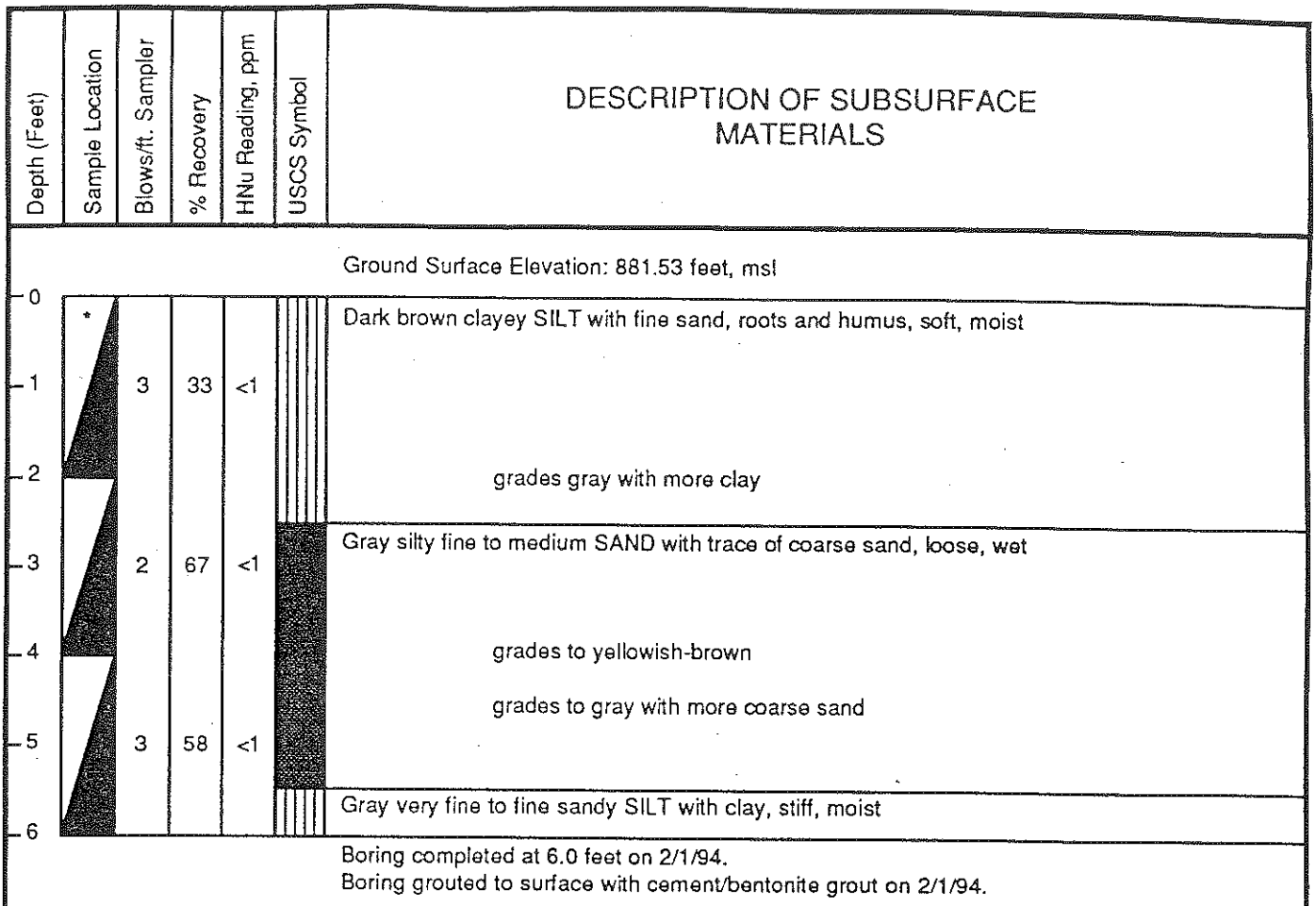
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-12



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-13

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.77 feet, msl
0	*	1	58	<1		Dark brown silty CLAY with fine sand, roots and humus, soft, moist
1						
2						grades gray and without humus from 2.3 to 2.5 feet
3		5	75	<1		Gray to yellowish-brown silty fine to coarse SAND with trace of fine gravel, loose, wet
4						
5		15	83	<1		grades with more medium to coarse sand and silt
6						
						Boring completed at 6.0 feet on 2/1/94. Boring grouted to surface with cement/bentonite grout on 2/1/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

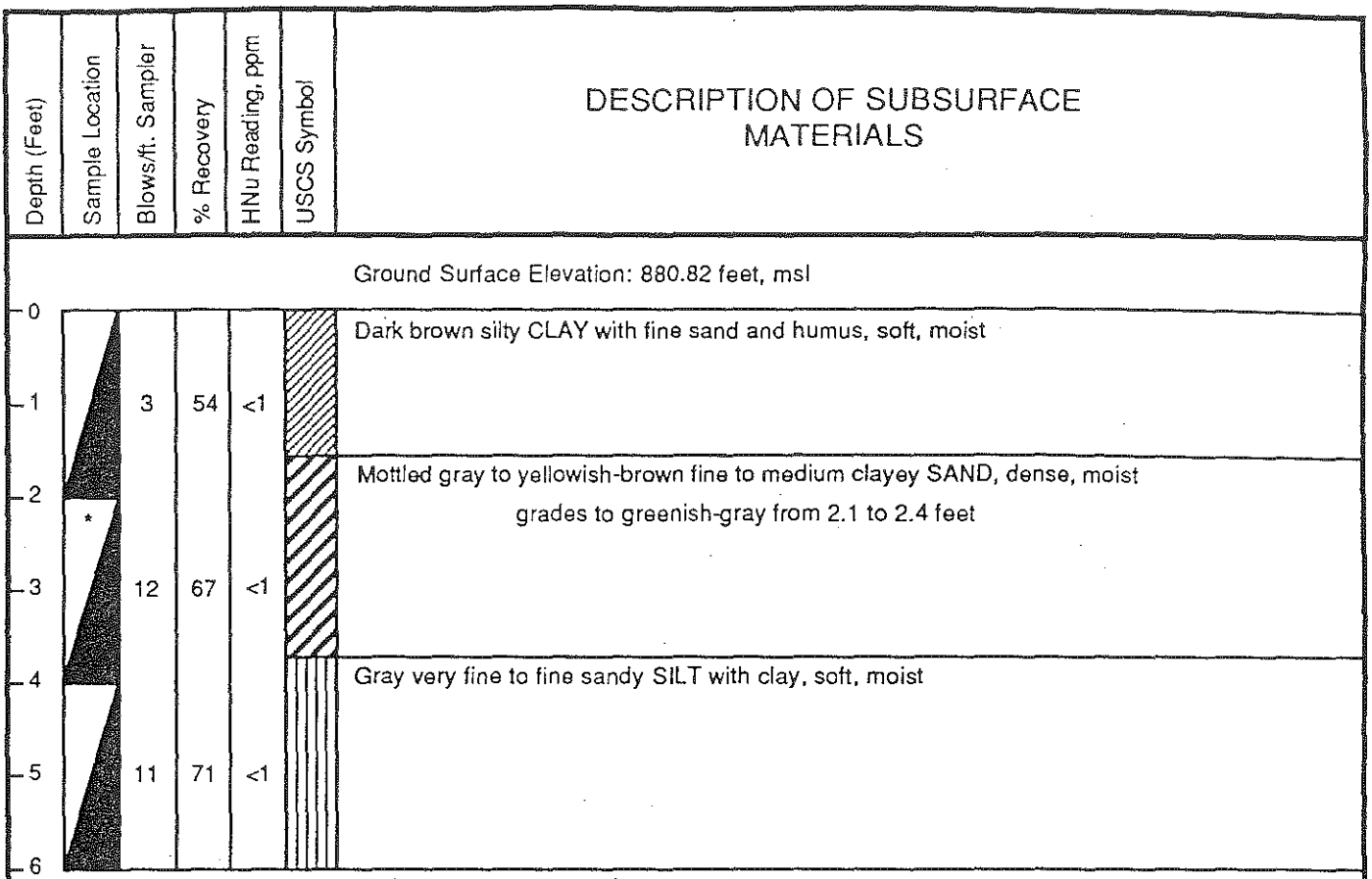
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-14



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

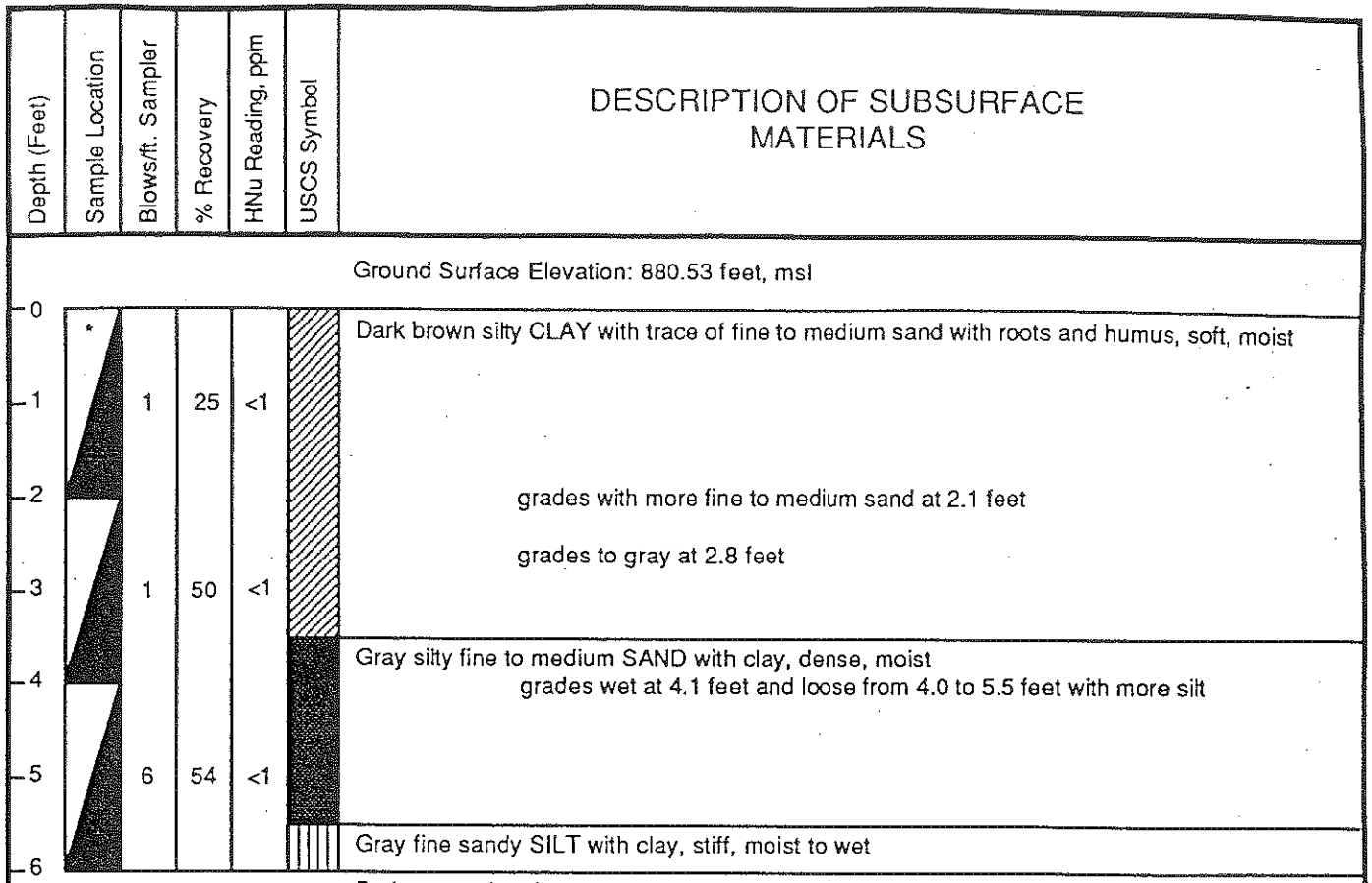
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-15



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-16

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.45 feet, msl
0	*	1	38	<1		Dark brown silty CLAY with fine sand, roots and humus, soft, moist
1						grades with reddish-brown lenses at 0.4 and 1.7 feet
2						
3		2	25	<1		Brownish-gray fine to coarse clayey SAND with silt and fine gravel, dense, moist
4						grades fine to medium with silt
						grades wet
5		<1	25	<1		grades with medium to coarse sand and fine gravel at 5.7 feet
6						Boring completed at 6.0 feet on 2/2/94. Boring grouted to surface with cement/bentonite grout on 2/2/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

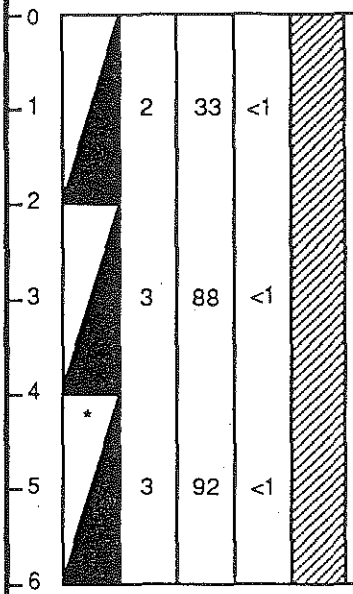
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-17



DESCRIPTION OF SUBSURFACE MATERIALS

Ground Surface Elevation: 880.52 feet, msl

Dark brown silty CLAY with trace of very fine sand with roots and humus, soft, moist

grades with fine to medium sand and dense at 2.5, 3.1 and 4.2 feet
grades to gray at 2.6 feet

grades with fine sand at 3.7 feet

grades mottled bluish-gray with coarse sand and a trace of fine gravel

Boring completed at 6.0 feet on 2/2/94.
Boring grouted to surface with cement/bentonite grout on 2/2/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-18

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.30 feet, msl
0						
1		<1	33	<1		Dark brown silty CLAY with trace of fine sand, roots and humus, soft, moist
2						grades with fine to medium sand
3		3	38	<1		Mottled brown and gray clayey fine to medium SAND with silt, dense, moist
4	*					grades with medium to coarse sand and clay
5		<1	92	<1		Gray to bluish-gray silty CLAY with fine to medium sand, soft, moist
6						

Boring completed at 6.0 feet on 2/2/94.
Boring grouted to surface with cement/bentonite grout on 2/2/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-19

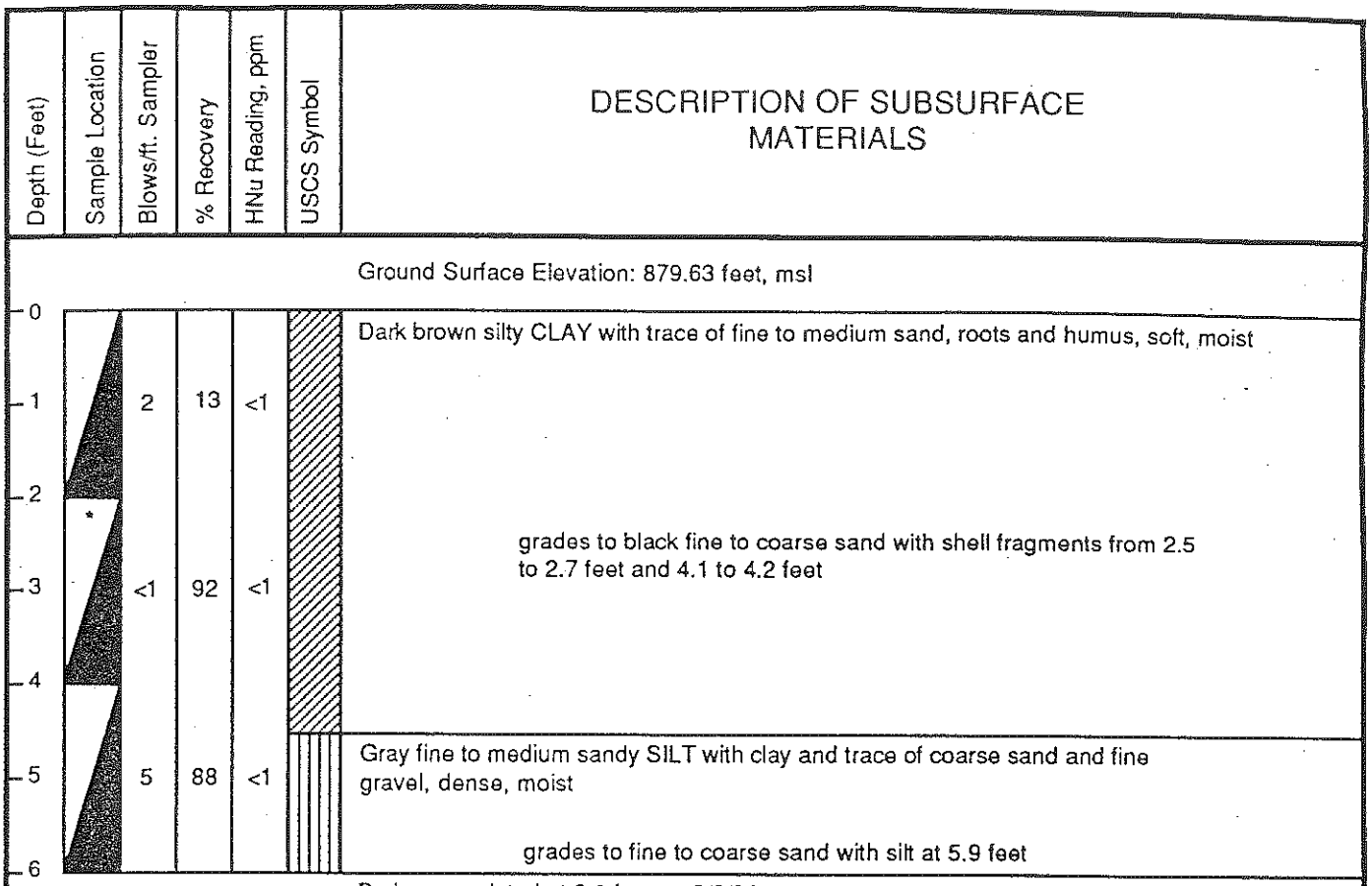
Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 879.68 feet, msl
0	*					Dark brown silty CLAY with trace of fine sand, roots and humus, soft, moist
1		<1	88	<1		
2						
3		<1	67	<1		grades to gray
4						Gray clayey fine to medium SAND with silt, dense, wet
5		8	88	<1		grades with coarse sand and fine gravel from 4.5 to 5.2 feet
6						Gray very fine to fine sandy SILT with clay, medium stiff, moist to wet
						Boring completed at 6.0 feet on 2/2/94. Boring grouted to surface with cement/bentonite grout on 2/2/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-20



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-21

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.57 feet, msl
0						
1		1	33	<1		Dark brown silty CLAY with trace of fine sand, roots and humus, soft, moist
2	*					
3		1	67	<1		grades to greenish-gray at 2.8 feet grades with fine to medium sand seams at 3.2 and from 3.8 to 4.6 feet
4						
5		5	88	<1		Brown silty fine to medium SAND with trace of clay, loose, moist
6						Black to gray silty CLAY with trace of fine sand and gravel, stiff, moist

Boring completed at 6.0 feet on 2/2/94.
Boring grouted to surface with cement/bentonite grout on 2/2/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-22

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 881.12 feet, msl
0						
1		5	42	<1		Dark brown silty CLAY with trace of fine sand, roots and humus, and reddish-brown laminae, soft, moist
2	*					
3		1	79	<1		
4						Greenish-gray fine to medium sandy SILT with trace of clay, medium stiff, moist
5		4	100	<1		grades with dark gray
6						Dark gray silty CLAY with trace of fine sand, medium stiff, moist

Boring completed at 6.0 feet on 2/2/94.
Boring grouted to surface with cement/bentonite grout on 2/2/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-23

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 882.15 feet, msl
0						Dark brown to black silty CLAY with fine to coarse sand, fine gravel with roots, and humus, soft, moist
1		6	100	<1		
2	*					
3		4	79	<1		grades to grayish-brown with more coarse sand at 3.5 feet grades to black and gray at 3.9 feet
4						
5		7	92	<1		grades with fine to coarse sand seam
6						
						Boring completed at 6.0 feet on 2/3/94. Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-24

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.48 feet, msl
0	*	1	17	<1		Black silty CLAY with humus, soft, moist to wet
1						
2						
3		2	67	<1		Gray silty fine to medium SAND with trace of medium to coarse sand, dense
4						grades moist to wet at 4.3 feet
5		3	71	<1		
6						Boring completed at 6.0 feet on 1/25/94. Boring grouted to surface with cement/bentonite grout on 1/25/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

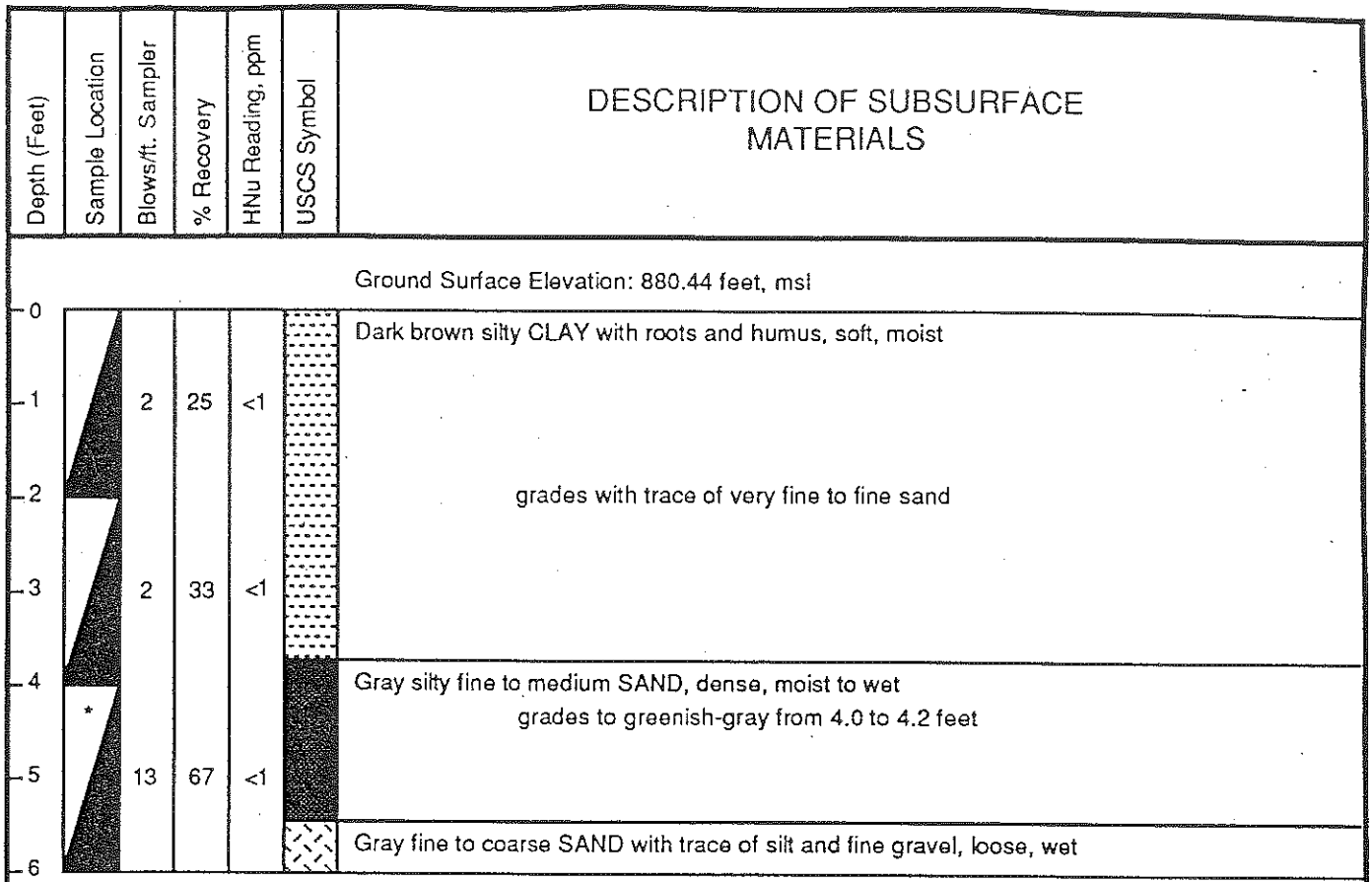
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-25



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-26

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.38 feet, msl
0	*					Dark brown clayey SILT with fine sand, soft, moist
1		2	21	<1		
2						
3		1	50	<1		grades with clay and fine to medium sand at 2.9 and 3.1 feet
4						Gray silty fine to coarse SAND with trace of clay, dense, moist to wet
5		8	67	<1		
6						Gray silty CLAY with trace of fine sand and silt, moist to wet
						Boring completed at 6.0 feet on 1/26/94. Boring grouted to surface with cement/bentonite grout on 1/26/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-27

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.25 feet, msl
0	*	2	92	<1		Mottled dark brown to yellowish-brown and gray clayey SILT with fine to coarse sand, roots and humus, soft, moist to wet
1						
2						
3		3	54	<1		Gray silty CLAY with fine to medium sand seams at 3.0, 3.5, 4.8, and 5.2 feet, soft, moist to wet
4						
5		5	67	<1		grades more stiff
6						Boring completed at 6.0 feet on 1/26/94. Boring grouted to surface with cement/bentonite grout on 1/26/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-28

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.46 feet, msl
0	*	1	58	<1		Dark brown clayey SILT with trace of fine sand with roots, soft, moist
1						
2						Gray silty fine to medium SAND with coarse sand, dense, moist
3		2	-	<1		
4						grades with more coarse sand and fine gravel
5		3	-	<1		
6						Gray fine sandy SILT, soft, moist

Boring completed at 6.0 feet on 1/26/94.
Boring grouted to surface with cement/bentonite grout on 1/26/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

\- Not Recorded

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-29

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.76 feet, msl
0	*	2	17	<1		Mottled dark brown to reddish-brown silty CLAY with trace of fine sand and roots, moist
1						
2		1	50	<1		Gray fine to medium sandy SILT, medium stiff, moist to wet
3						
4						grades with less silt from 3.9 to 4.1 feet
5		4	92	<1		grades more stiff
6						Boring completed at 6.0 feet on 1/26/94. Boring grouted to surface with cement/bentonite grout on 1/26/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-30

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 880.76 feet, msl
0	*	2	50	<1		Dark brown clayey SILT with trace of fine sand, soft, moist
1						grades to greenish-gray with more fine sand from 0.9 to 1.1 feet
2	*					
3		1	58	<1		
4						Gray silty fine to medium SAND with trace of clay and coarse sand, dense, wet
5		6	83	<1		grades with more coarse sand, loose
6						Boring completed at 6.0 feet on 1/26/94. Boring grouted to surface with cement/bentonite grout on 1/26/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

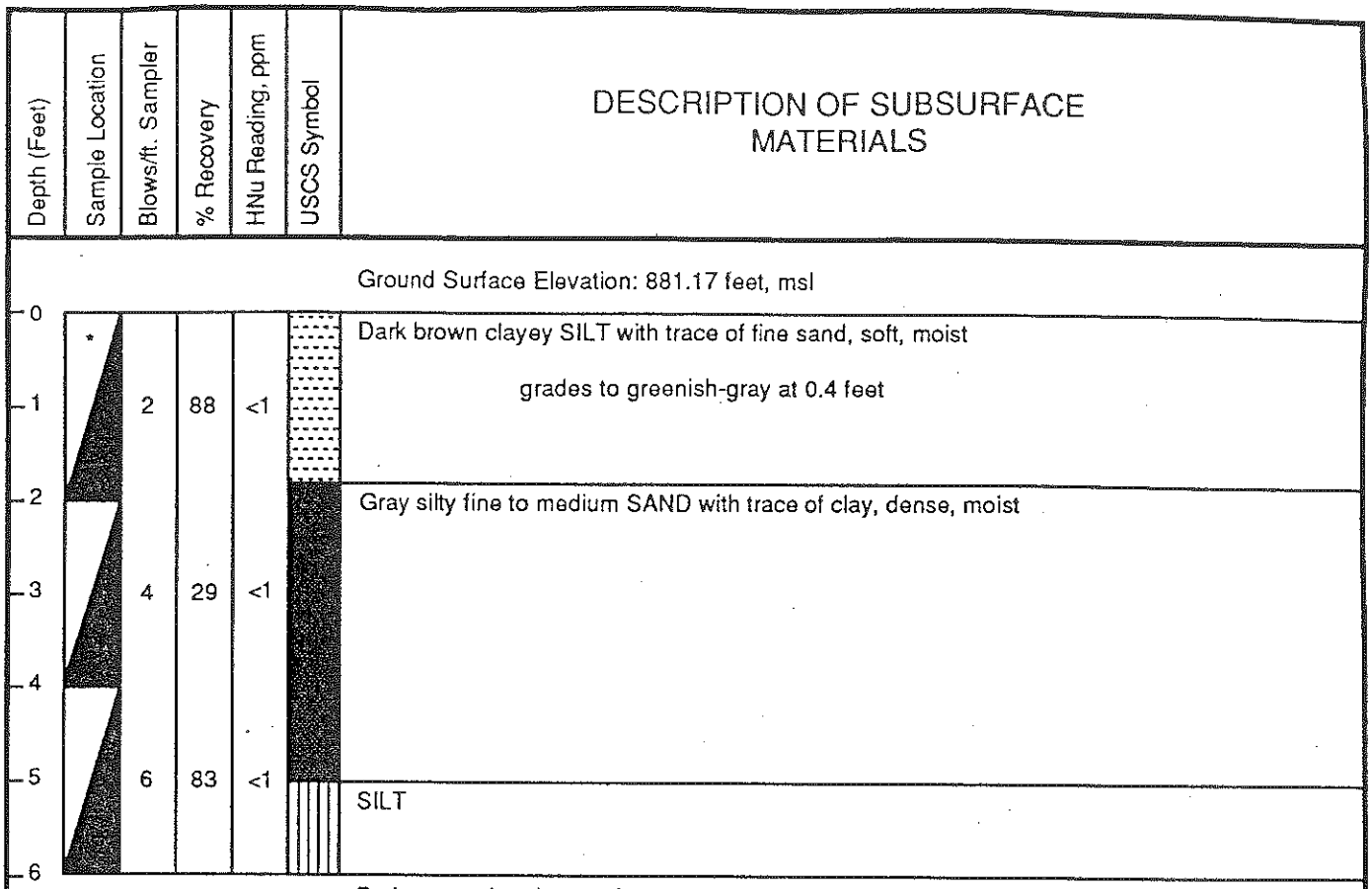
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-31



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-32

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 881.23 feet, msl
0	*					Brown PEAT
1		2	92	<1		Dark brown to greenish-gray silty CLAY with humus, soft, moist
2						
3		7	75	<1		Gray silty CLAY with fine to coarse sand, medium stiff, moist
4						grades wet at 4.1 feet
5		17	71	<1		Fine to medium sandy SILT with trace of clay, medium stiff, wet
6						Boring completed at 6.0 feet on 1/28/94. Boring grouted to surface with cement/bentonite grout on 1/28/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-33

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 81.50 feet, msl
0	*	2	83	<1		Yellowish-brown silty fine to medium SAND with roots and humus
1						Dark brown silty CLAY with humus, soft, moist
2		6	67	<1		Greenish-gray very fine to fine sandy SILT, soft, moist
3						Gray silty fine to coarse SAND with trace of fine gravel, loose, wet from 2.7 to 4.3 feet
4		12	67	<1		Gray very fine to fine sandy SILT, medium dense, wet
5						
6						

Boring completed at 6.0 feet on 1/28/94.
Boring grouted to surface with cement/bentonite grout on 1/28/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-34

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 882.02 feet, msl
0	*	2	92	0		Bluish-green SLUDGE with trace of fine sand, very stiff, moist
1						grades to dark brown with trace of roots and less fine to medium sand, medium stiff, moist
2						Gray silty fine to medium SAND with trace of clay, medium to coarse sand and fine gravel, dense, wet
3		7	67	0		
4						grades with dark gray streaks and less medium to coarse sand and fine gravel at 4.8 feet
5		12	83	0		
6						Boring completed at 6.0 feet on 1/28/94. Boring grouted to surface with cement/bentonite grout on 1/28/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-35

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.69 feet, msl
0	*	4	71	0		PEAT to 2.0 feet
1						Mottled brown to gray silty CLAY with fine to medium sand, medium stiff, moist
2						grades with more fine to medium sand at 1.8 feet
						grades to dark brown with less sand from 1.8 to 2.1 feet
3		3	75	0		grades dark gray to yellowish-brown with trace of fine gravel
4						grades with more sand from 2.7 to 3.0 feet
5		7	92	0		
6						Boring completed at 6.0 feet on 1/28/94.
						Boring grouted to surface with cement/bentonite grout on 1/28/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

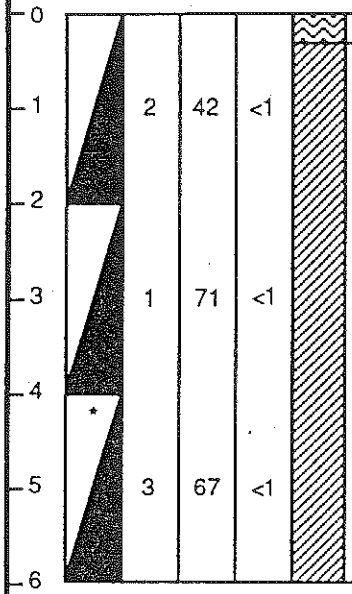
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-36



DESCRIPTION OF SUBSURFACE MATERIALS

Ground Surface Elevation: 883.73 feet, msl

Dark brown PEAT

Dark gray silty CLAY with trace of fine to coarse sand and fine gravel, soft, moist to wet

grades mottled yellowish-brown

grades to gray with trace of medium to coarse sand and fine gravel, very stiff, moist

grades to dark green with very fine sandy silt from 5.1 to 5.3 feet

Boring completed at 6.0 feet on 1/28/94.
Boring grouted to surface with cement/bentonite grout on 1/28/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-37

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 884.59 feet, msl
0	*	4	46	<1		Dark brown silty CLAY with trace of fine to coarse sand and fine gravel, roots and humus, soft, moist
1						
2						grades to gray mottled reddish-brown with more fine to coarse sand
3		5	33	<1		
4						
5		7	100	<1		grades to gray at 5.0 feet
6						

Boring completed at 6.0 feet on 2/3/94.
Boring grouted to surface with cement/bentonite grout on 2/3/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-38

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.60 feet, msl
0						Brown silty CLAY, slightly moist, medium stiff
1		5	100	<1		
2						grades mottled orange at 2.0 feet
	*					
3		6	58	4.0		
4						grades gray to light brown and moist at 4.4 feet
5		6	58	<1		
6						Boring completed at 6.0 feet on 1/13/94. Boring grouted to surface with cement/bentonite grout on 1/13/94.

LEGEND:

Split Spoon SampleSample

* Selected Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-39

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.87 feet, msl
0						
1		36	92	<1		Brown silty fine to medium SAND with trace clay and fine gravel, dense, moist
2						
3		10	92	<1		Dark gray silty CLAY with trace fine to medium sand, medium stiff, moist
4	*					grades with black streaks and greenish from 4.5 to 5.8 feet
5			96	<1		
6						grades to gray and brown at 5.8 feet

Boring completed at 6.0 feet on 1/17/94.
Boring grouted to surface with cement/bentonite grout on 1/17/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-41

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.28 feet, msl
0	*					Dark brown fine to medium SAND with clay, silt, and gravel, loose, slightly moist
1		7	92	<1		
2						grades light brown and without gravel at 2.2 feet
3		10	92	<1		
4						grades with fine gravel and medium dense at 4.5 feet
5		23	83	<1		
6						
7		6	75	<1		grades dark gray
8						

Boring completed at 8.0 feet on 1/24/94.
Boring grouted to surface with cement/bentonite grout on 1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-42

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.62 feet, msl
0						Brown medium SAND with fine gravel, loose to medium dense, slightly moist
1		9	75	<1		
2						
3		6	33	<1		
4	*					
5		8	58	3.0		grades to greenish-gray mottled bluish-green at 4.8 feet
6						
7		7	92	3.0		grades dark gray mottled orange brown from 6.5 to 7.5 feet
8						
9		10	75	<1		
10						Gray medium to coarse SAND, medium dense, moist

Boring completed at 10.0 feet on 1/24/94.
Boring grouted to surface with cement/bentonite grout on 1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-43

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.55 feet, msl
0						Dark brown to dark gray fine to coarse SAND with trace gravel, loose, moist
1		2	100	<1		
2						
3		7	83	<1		
4	*					grades dark gray at 4.0 feet
						grades with bluish-green sludge at 4.7 feet
5		6	92	<1		
6						grades dark gray and without gravel at 6.4 feet
7		6	92	<1		
8						grades gray and coarse
						Boring completed at 8.0 feet on 1/24/94.
						Boring grouted to surface with cement/bentonite grout on 1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-44

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 881.24 feet, msl
0	*	2	46	<1		Black CLAY with humus, soft, moist to dry
1						
2						grades to dark brown with fine to medium sand at 2.1 feet, very soft, moist
3		2	50	<1		
4						Gray silty CLAY with trace of very fine to medium sand, soft, moist
5		3	67	<1		grades to fine to medium sand
6						Silty fine to coarse SAND with trace of gravel, loose, wet

Boring completed at 6.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on1/25/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-45

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 882.76 feet, msl
0	*	2	33	<1		Dark brown CLAY with humus, soft, moist
1						
2						grades with silty very fine sand and silt
3		4	50	-		grades with black at 3.0 feet grades reddish-yellow to light brown grades with black
4						Yellowish-brown silty very fine to fine SAND, loose, moist
5		2	83	-		Gray silty CLAY with trace of very fine sand, soft, moist
6						

Boring completed at 6.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on1/25/94.

LEGEND:

- Split Spoon Sample
- * Sample Selected for Laboratory Analysis
- - Not Recorded

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-46

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 881.40 feet, msl
0						
1		3	83	<1		Brown fine to medium SAND with clay and silt, loose, moist
2	*					
3		3	75	<1		grades greenish-gray and wet at 3.6 feet
4						
5		8	75	<1		grades gray at 5.0 feet
6						

Boring completed at 6.0 feet on 1/11/94.
Boring grouted to surface with cement/bentonite grout on 1/11/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-47

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 881.57 feet, msl
0						Brown fine to medium SAND with clay and silt, loose, moist
1		7	83	<1		
2						
3	*	5	75	<1		grades with less clay at 3.8 feet
4						
5		12	75	<1		grades wet at 5.2 feet
6						

Boring completed at 6.0 feet on 1/11/94.
Boring grouted to surface with cement/bentonite grout on 1/11/94.

LEGEND:

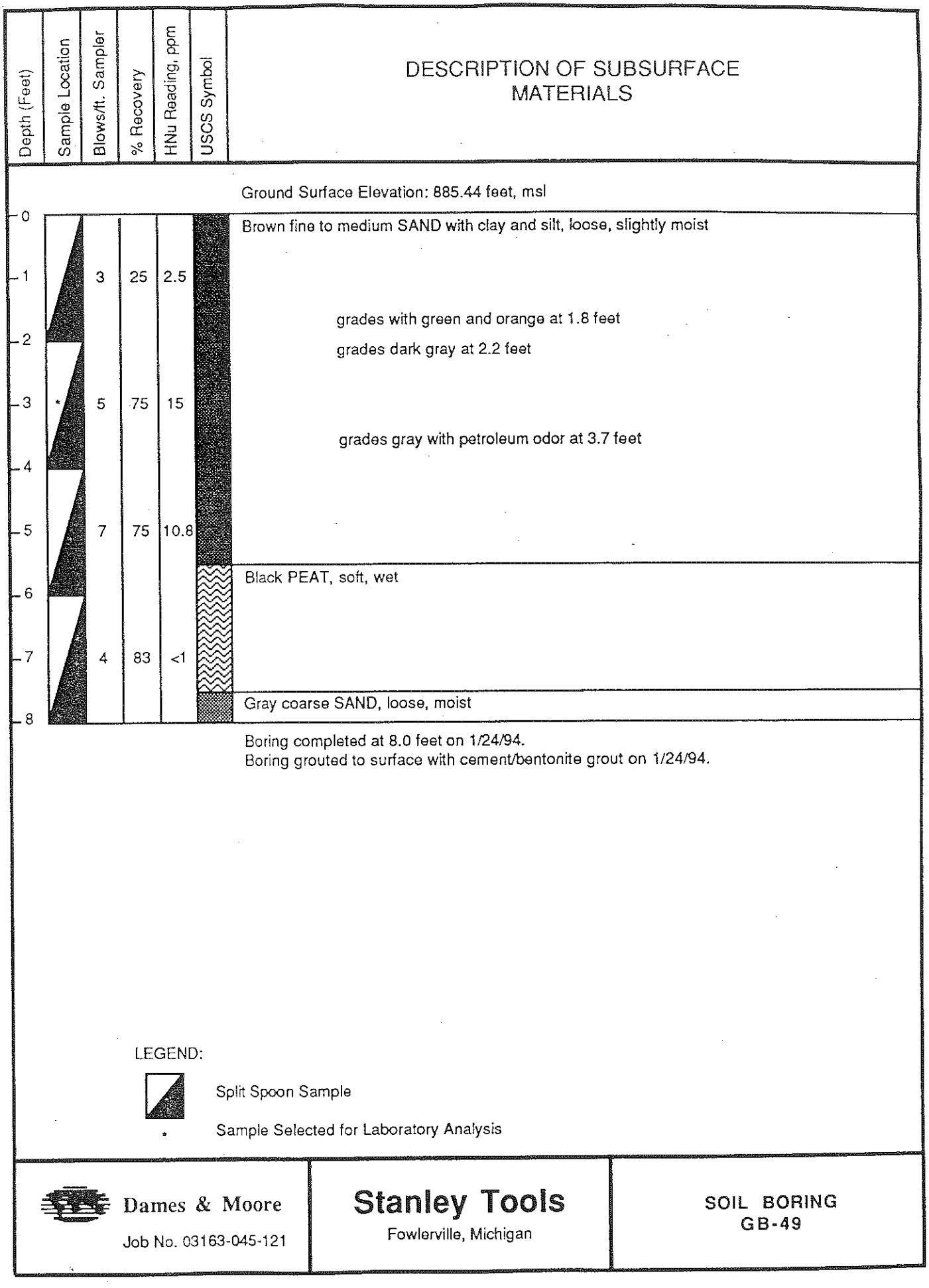
Split Spoon Sample

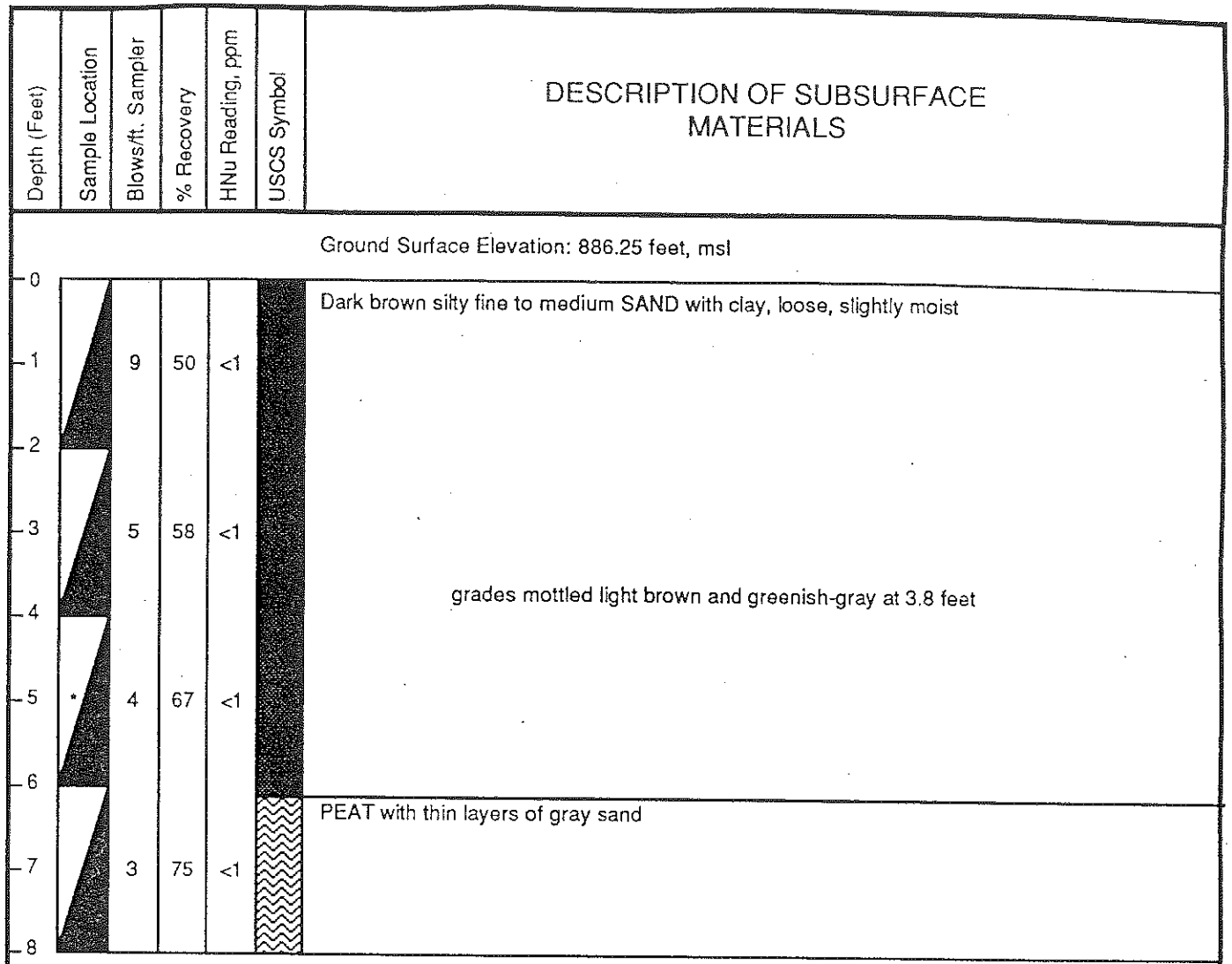
* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-48


Depth (Feet)
Sample Location
Blows/ft. Sampler
% Recovery
HNu Reading, ppm
USCS Symbol
DESCRIPTION OF SUBSURFACE MATERIALS
Ground Surface Elevation: 885.44 feet, msl
0
1
2
3
4
5
6
7
8
3
25
2.5
*
5
75
15
7
75
10.8
4
83
<1
Brown fine to medium SAND with clay and silt, loose, slightly moist
grades with green and orange at 1.8 feet
grades dark gray at 2.2 feet
grades gray with petroleum odor at 3.7 feet
Black PEAT, soft, wet
Gray coarse SAND, loose, moist
Boring completed at 8.0 feet on 1/24/94.
Boring grouted to surface with cement/bentonite grout on 1/24/94.
LEGEND:
Split Spoon Sample
* Sample Selected for Laboratory Analysis
Dames & Moore
Job No. 03163-045-121
Stanley Tools
Fowlerville, Michigan
SOIL BORING
GB-49



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-50

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.50 feet, msl
0						
1	*	10	58	<1		Dark brown fine to medium SAND with clay, silt, and fine gravel, medium dense, slightly moist
2						Dark brown medium to coarse SAND with fine gravel, loose, slightly moist
3		7	92	<1		
4						
5		9	92	<1		grades darker brown and moist at 4.8 feet
6						
7		8	58	<1		grades gray and moist to wet at 7.0 feet
8						

Boring completed at 8.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on 1/25/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-51

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.34 feet, msl
0						Brown silty CLAY with trace of fine to medium sand, loose, moist
1		9	92	<1		
2						grades brown and gray at 2.2 feet
3		8	88	<1		
4						grades to gray at 3.8 feet grades wet at 4.0 feet
5	*	5	92	<1		grades with black streaks from 4.8 to 6.0 feet
6						

Boring completed at 6.0 feet on 1/14/94.
Boring grouted to surface with cement/bentonite grout on 1/14/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-52

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.09 feet, msl
0						Mottled brown fine to medium SAND with clay and silt, dense, slightly moist
1		32	100	<1		
2						
3	*	11	83	<1		grades medium dense and moist at 2.6 feet
4						Brown sandy CLAY, stiff, moist
5		10	83	<1		grades gray at 5.6 feet
6						

Boring completed at 6.0 feet on 1/13/94.
Boring grouted to surface with cement/bentonite grout on 1/13/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-53

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.73 feet, msl
0	*	17	67	<1		Mottled brown and gray fine to medium SAND with clay and silt, dense, moist
1						
2		9	100	<1		Brown sandy CLAY, medium stiff to stiff, moist
3						
4		7	100	<1		grades gray at 4.6 feet
5						
6						Boring completed at 6.0 feet on 1/13/94. Boring grouted to surface with cement/bentonite grout on 1/13/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-54

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.26 feet, msl
0	*	51	88	1.0		Brown fine to medium sandy CLAY with trace gravel, stiff, slightly moist
1						
2						Brown fine to medium SAND with clay and silt, medium dense, moist
3		11	92	1.0		
4						Brown silty CLAY with fine to medium sandy gravel, stiff, moist (TILL)
5		16	92	1.0		
6						

Boring completed at 6.0 feet on 1/14/94.
Boring grouted to surface with cement/bentonite grout on 1/14/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-55

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.70 feet, msl
0						Light brown fine to medium SAND with clay and silt, dense, slightly moist
1		34	100	<1		grades with less clay and silt, moist at 1.2 feet
2						grades green to drak gray and loose at 2.3 feet
3	*	7	88	<1		grades brown at 3.5 feet
4						
5		8	100	<1		Brown silty CLAY with fine sand, medium stiff, moist
6						Boring completed at 6.0 feet on 1/13/94. Boring grouted to surface with cement/bentonite grout on 1/13/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-56

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.57 feet, msl
0						
1	*	13	58	<1		Brown fine to coarse SAND with fine gravel, medium dense, moist
2						Dark gray silty CLAY with trace of fine to coarse sand, stiff, dry to moist
3		11	83	<1		
4						
5		8	58	<1		
6						

Boring completed at 6.0 feet on 1/14/94.
Boring grouted to surface with cement/bentonite grout on 1/14/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-57

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 884.88 feet, msl
0						
1		8	83	<1		Light brown fine to medium SAND with clay and silt, slightly loose, moist
2						
3	*	11	92	<1		grades medium dense at 2.0 feet
4						
5		12	75	<1		grades dark brown to gray at 4.5 feet
6						

Boring completed at 6.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on 1/25/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-58

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.77 feet, msl
0						Brown fine to medium SAND with clay and silt, loose, slightly moist
1		4	83	<1		
2						
3	*	4	83	3.4		grades grayish-brown at 2.8 feet grades gray at 3.2 feet
4						
5		4	33	2.0		
6						Boring completed at 6.0 feet on 1/24/94. Boring grouted to surface with cement/bentonite grout on 1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-59

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 882.40 feet, msl
0	*	10	50	<1		Dark brown fine to medium SAND with clay and silt, wood fragments, medium dense, moist
1						
2		4	67	<1		grades with more clay and silt at 3.6 feet
3						
4		2	92	1		
5						
6						Boring completed at 6.0 feet on 1/11/94. Boring grouted to surface with cement/bentonite grout on 1/11/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-60

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.06 feet, msl
0	*	8	46	<1		Brown fine to medium SAND with clay and silt, loose, dry to moist
1						
2		9	33	<1		trace of wood fragments at 3.0 feet
3						
4		4	58	<1		
5						
6						Boring completed at 6.0 feet on 1/11/94. Boring grouted to surface with cement/bentonite grout on 1/11/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-61

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.95 feet, msl
0						Brown fine to medium SAND with clay, silt, and gravel, loose, slightly moist
1		4	50	<1		grades with less clay and silt
2						
3		5	75	<1		grades dark brown with clay and silt at 2.3 feet
4						
5	*	4	83	5.2		grades gray with petroleum odor and moist at 4.4 feet
6						

Boring completed at 6.0 feet on 1/24/94.
Boring grouted to surface with cement/bentonite grout on 1/24/94.

LEGEND:

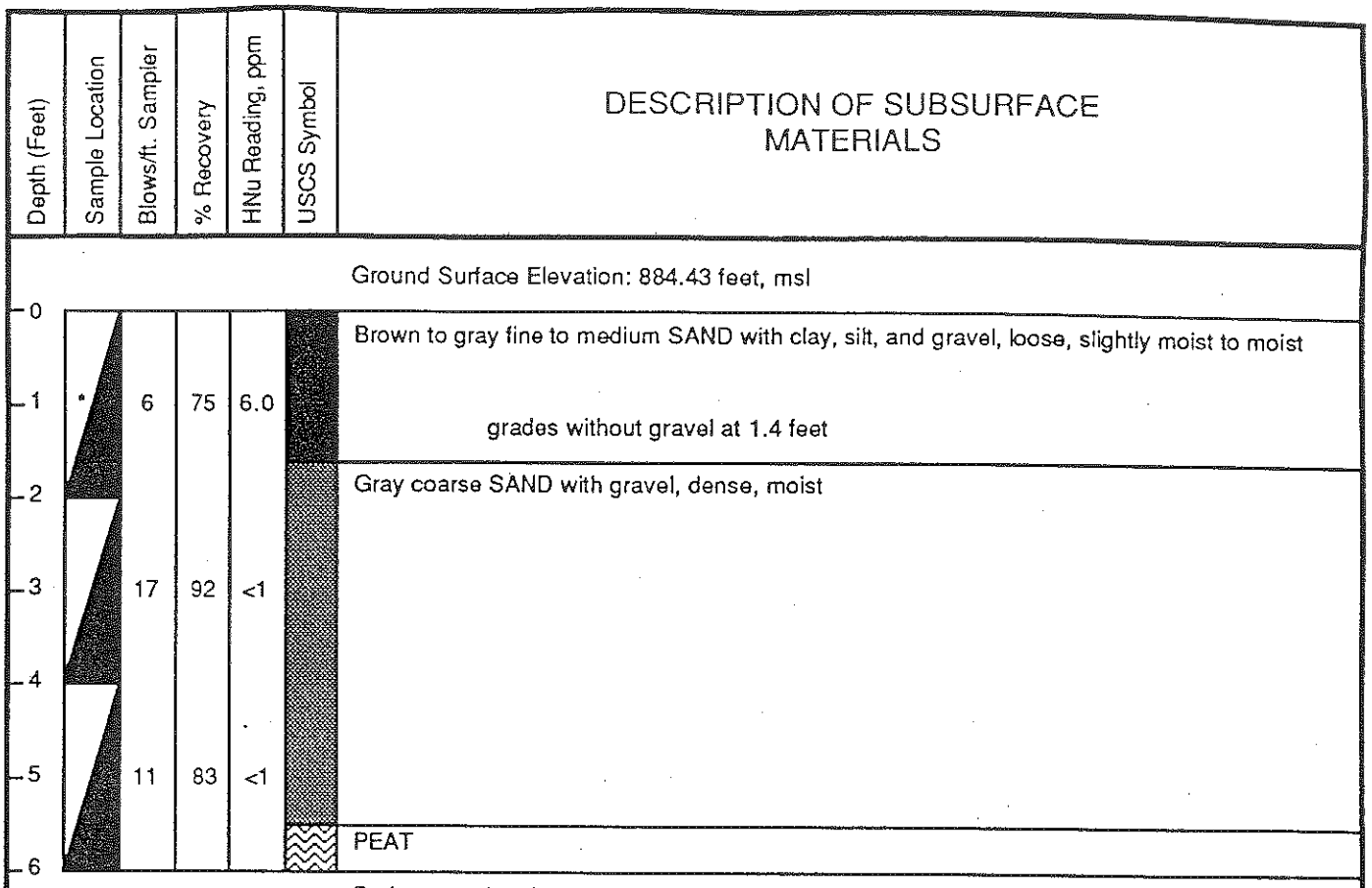
Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-62



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-63

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 884.39 feet, msl
0						
1	*	10	83	2.0		Brown fine to medium SAND with clay and silt, medium dense, slightly moist
2						grades to dark gray and loose at 1.3 feet
3		4	83	<1		grades brown and moist at 2.5 feet
4						
5		7	100	1.4		
6						

Boring completed at 6.0 feet on 1/12/94.
Boring grouted to surface with cement/bentonite grout on 1/12/94.

LEGEND:

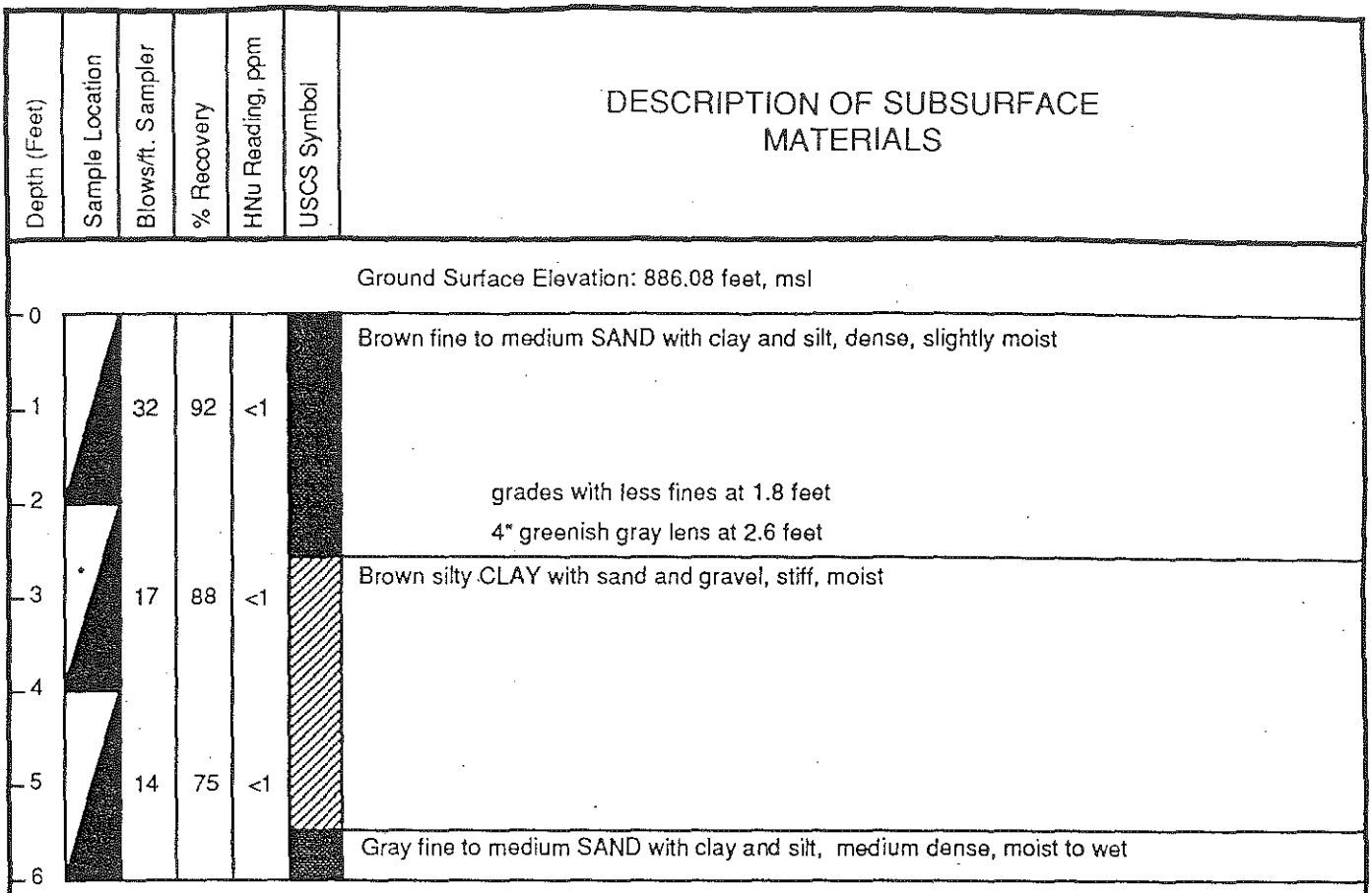
Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-64



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-65

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.40 feet, msl
0						
1		120	67	<1		Brown fine to medium SAND with clay and silt, dense, slightly moist
2						grades mottled black with greenish-gray at 2.3 feet
3	*	13	75	<1		Brown fine to medium sandy CLAY, medium stiff, moist
4						
5		9	83	<1		grades gray at 4.8 feet
6						

Boring completed at 6.0 feet on 1/13/94.
Boring grouted to surface with cement/bentonite grout on 1/13/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-66

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.95 feet, msl
0	*	23	25	<1		Brown fine to medium sandy CLAY with trace of fine gravel, stiff, moist
1						grades with black fine sand from 1.0 to 3.0 feet
2						grades with more fine to medium sand, soft and moist at 1.8 feet
3		2	75	<1		
4						
5	*	9	67	<1		Brown fine to medium SAND with clay, medium stiff, wet
6						grades with more coarse sand at 5.5 feet
						Boring completed at 6.0 feet on 1/14/94. Boring grouted to surface with cement/bentonite grout on 1/14/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-67

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.42 feet, msl
0						
1		11	92	1.2		Brown fine to medium SAND with clay and silt, medium dense, slightly moist
2						
3	*	9	83	15.4		grades to dark gray with petroleum odor at 2.9 feet
4						
5		12	100	2.5		grades to light gray and moist at 5.0 feet
6						

Boring completed at 6.0 feet on 1/12/94.
Boring grouted to surface with cement/bentonite grout on 1/12/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-68

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.41 feet, msl
0	*	55	100	6.6		Dark gray silty CLAY with fine to coarse sand and fine to medium gravel, hard, moist to dry (TILL)
1						
2						
3		15	71	<1		
4						Gray fine sandy SILT with clay and trace of medium sand, medium stiff, moist
5		5	71	<1		Fine to coarse SAND with silt and trace of gravel, loose, wet
6						

Boring completed at 6.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on1/25/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-69

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.63 feet, msl
0	*	10	92	<1		Brown to gray fine to medium SAND with clay, silt, and fine gravel, medium dense, slightly moist
1						
2						
3		15	92	<1		grades dark brown at 3.2 feet
4						
5		13	83	<1		
6						Boring completed at 6.0 feet on 1/24/94. Boring grouted to surface with cement/bentonite grout on 1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-70

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.04 feet, msl
0						Dark brown silty CLAY with fine to medium sand and roots, hard, moist to dry
1		12	75	<1		Mottled dark brown, black, and reddish-brown fine to medium sandy SILT with trace of clay
2	*					grades mottled dark gray to black
3		6	75	<1		
4						Gray fine to coarse SAND with silt and fine gravel
5		7	67	<1		grades to browinsh-yellow
6						

Boring completed at 6.0 feet on 1/24/94.
Boring grouted to surface with cement/bentonite grout on1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-71

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 884.90 feet, msl
0						
1		66	92	<1		Brown silty medium SAND with clay, silt, and fine gravel, dense, moist
2						
3		13	75	<1		grades dark brown and medium dense at 2.4 feet
4						
5	*	10	75	<1		grades with layers of black sand at 5.0 feet
6						

Boring completed at 6.0 feet on 1/26/94.
Boring grouted to surface with cement/bentonite grout on 1/26/94.

LEGEND:

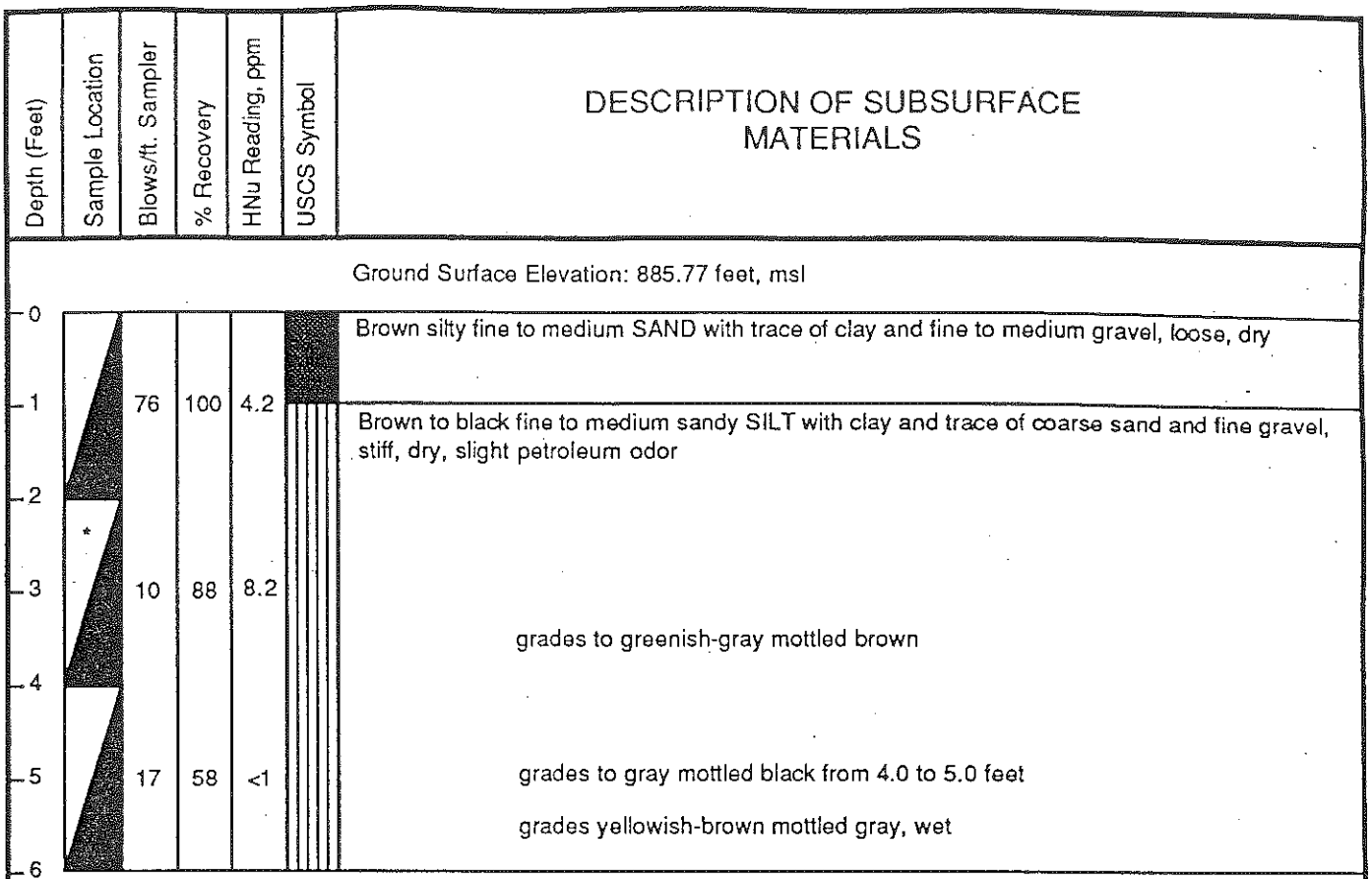
Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-72



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-73

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.38 feet, msl
0						Brown to black fine to coarse sandy CLAY with trace of silt and coarse sand, dry
1		45	100	11.0		grades to black with more silt
2	*					grades to greenish-gray from 1.8 to 2.5 feet
3		11	100	5.6		
4						
5		10	-	3.4		Brown silty fine to medium SAND, medium stiff, wet
6						

Boring completed at 6.0 feet on 1/22/94.
Boring grouted to surface with cement/bentonite grout on1/22/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

\- Not Recorded

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-74

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.80 feet, msl
0		-	60	<1		Gray to brown silty CLAY with trace of fine to coarse sand and fine to medium gravel (TILL)
1	*	79	100	<1		grades to black, stiff, dry
2						grades to greenish-gray
						grades to brown mottled gray
3		18	92	<1		
4						grades soft
5		14	100	<1		
6						grades to gray

Boring completed at 6.0 feet on 1/22/94.
Boring grouted to surface with cement/bentonite grout on1/22/94.

LEGEND:

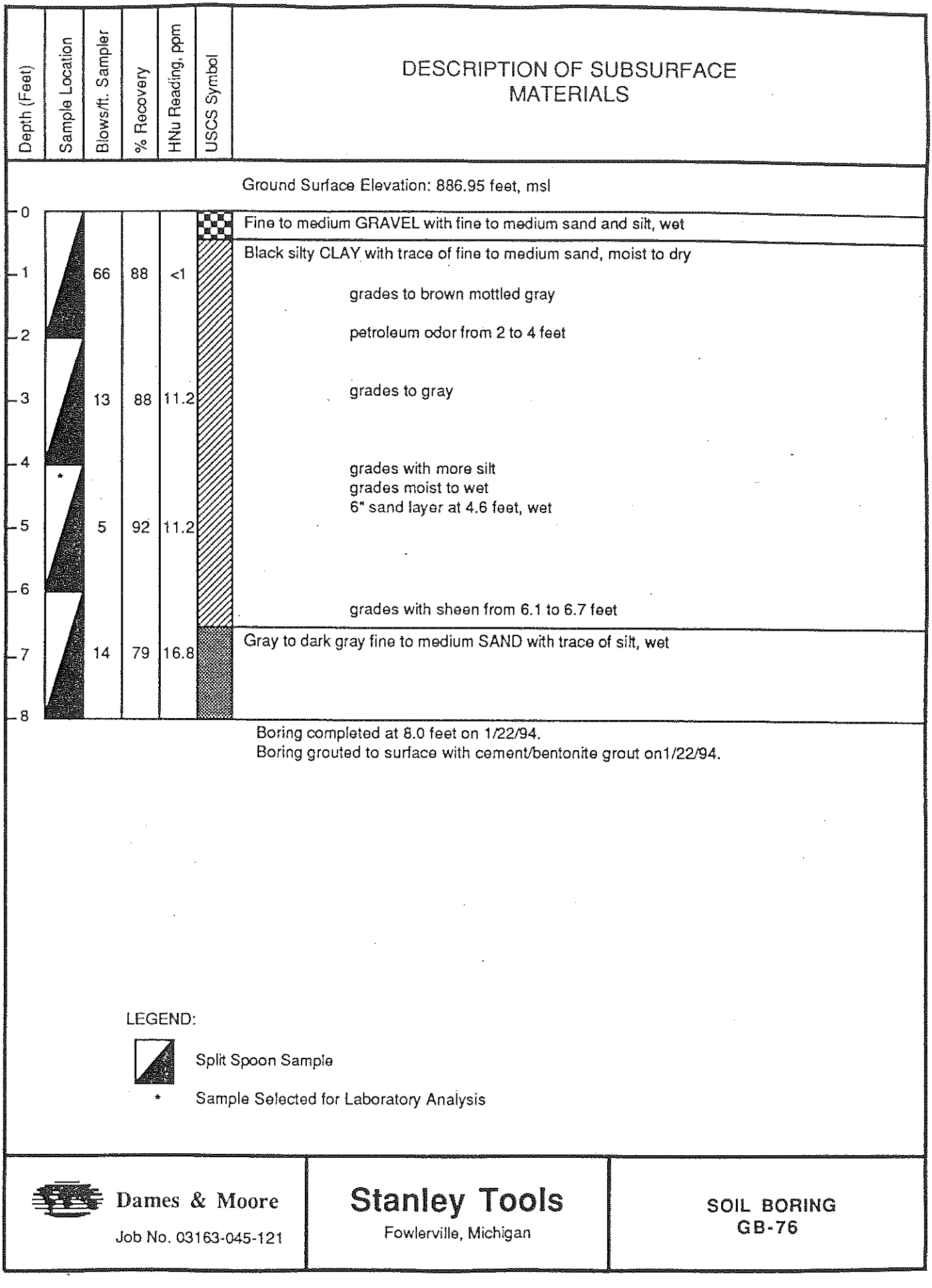
Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-75


Depth (Feet)
Sample Location
Blows/ft. Sampler
% Recovery
HNu Reading, ppm
USCS Symbol
DESCRIPTION OF SUBSURFACE MATERIALS
Ground Surface Elevation: 886.95 feet, msl
0
1
2
3
4
5
6
7
8
66
88
<1
13
88
11.2
*
5
92
11.2
14
79
16.8
Fine to medium GRAVEL with fine to medium sand and silt, wet
Black silty CLAY with trace of fine to medium sand, moist to dry
grades to brown mottled gray
petroleum odor from 2 to 4 feet
grades to gray
grades with more silt
grades moist to wet
6" sand layer at 4.6 feet, wet
grades with sheen from 6.1 to 6.7 feet
Gray to dark gray fine to medium SAND with trace of silt, wet
Boring completed at 8.0 feet on 1/22/94.
Boring grouted to surface with cement/bentonite grout on1/22/94.
LEGEND:
Split Spoon Sample
* Sample Selected for Laboratory Analysis
Dames & Moore
Job No. 03163-045-121
Stanley Tools
Fowlerville, Michigan
SOIL BORING
GB-76

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.11 feet, msl
0						Mottled brown to gray silty CLAY with fine sand with black streak, soft, moist
1		2	88	5.0		grades greenish-gray to brown with petroleum odor from 1:0 to1.75 feet
2						grades to brownish-yellow mottled gray with more fine sand and trace of fine gravel at 2.0 feet
3	*	9	92	19.8		grades to gray at 3.0 feet
4						grades with black streaks and moderate kerosene odor
5		3	92	10.4		grades with sand seam at 5.9 feet
6						

Boring completed at 6.0 feet on 1/23/94.
Boring grouted to surface with cement/bentonite grout on1/23/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-77

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.94 feet, msl
0						Concrete to 3.1"
1		29	25	<1		Reddish-brown to black silty CLAY with trace of fine to coarse sand and fine to medium gravel, hard, moist
2	*		58			grades mottled gray at 2.0 feet
3		15	92	<1		
4						grades with black
5		10	88	<1		grades gray mottled brown
6						grades soft and moist

Boring completed at 6.0 feet on 1/23/94.
Boring grouted to surface with cement/bentonite grout on1/23/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-78

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 883.02 feet, msl
0						
1	*	5	75	<1		Brown fine to medium SAND with clay and silt, loose, slightly moist
2						
3		8	83	<1		
4						grades light brown and moist at 4.0 feet
5		7	75	<1		Light gray fine sandy CLAY, medium stiff, moist to wet
6						

Boring completed at 6.0 feet on 1/25/94.
Boring grouted to surface with cement/bentonite grout on 1/25/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-79

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.75 feet, msl
0						Brown to black silty CLAY with fine to coarse sand and trace of fine gravel, medium stiff, moist to dry
1		15	92	<1		
2						grades with roots and mottled black from 0 to 2.0 feet grades with more fine to medium sand
3		2	83	<1		
4						grades to dark gray at 3.9 feet grades to black with more fine to medium sand from 4.1 to 4.7 feet
5	*	3	83	8.4		
6						grades to gray with trace of gravel from 6.0 to 7.0 feet, moist
7		10	83	<1		
8						Gray fine to medium SAND with trace of silt, loose, wet
						Boring completed at 8.0 feet on 1/24/94. Boring grouted to surface with cement/bentonite grout on1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-80

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 887.50 feet, msl
0						Brown fine to medium sandy CLAY with trace of silt and fine gravel, very stiff, dry
1		66	92	<1		grades with black at 1.0 foot
2						grades to bluish-gray with strong petroleum odor at 2.1 feet
3		11	92	16.0		grades mottled gray and brown with strong petroleum odor at 3.0 feet
4						grades with silt and strong petroleum odor
5		9	92	6.2		
6						Gray fine to medium SAND with trace of silt with petroleum odor, loose, wet
7	*	19	75	5.6		
8						grades to fine to coarse sand with faint petroleum odor
9		11	75	3.6		
10						Boring completed at 10.0 feet on 1/22/94. Boring grouted to surface with cement/bentonite grout on1/22/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

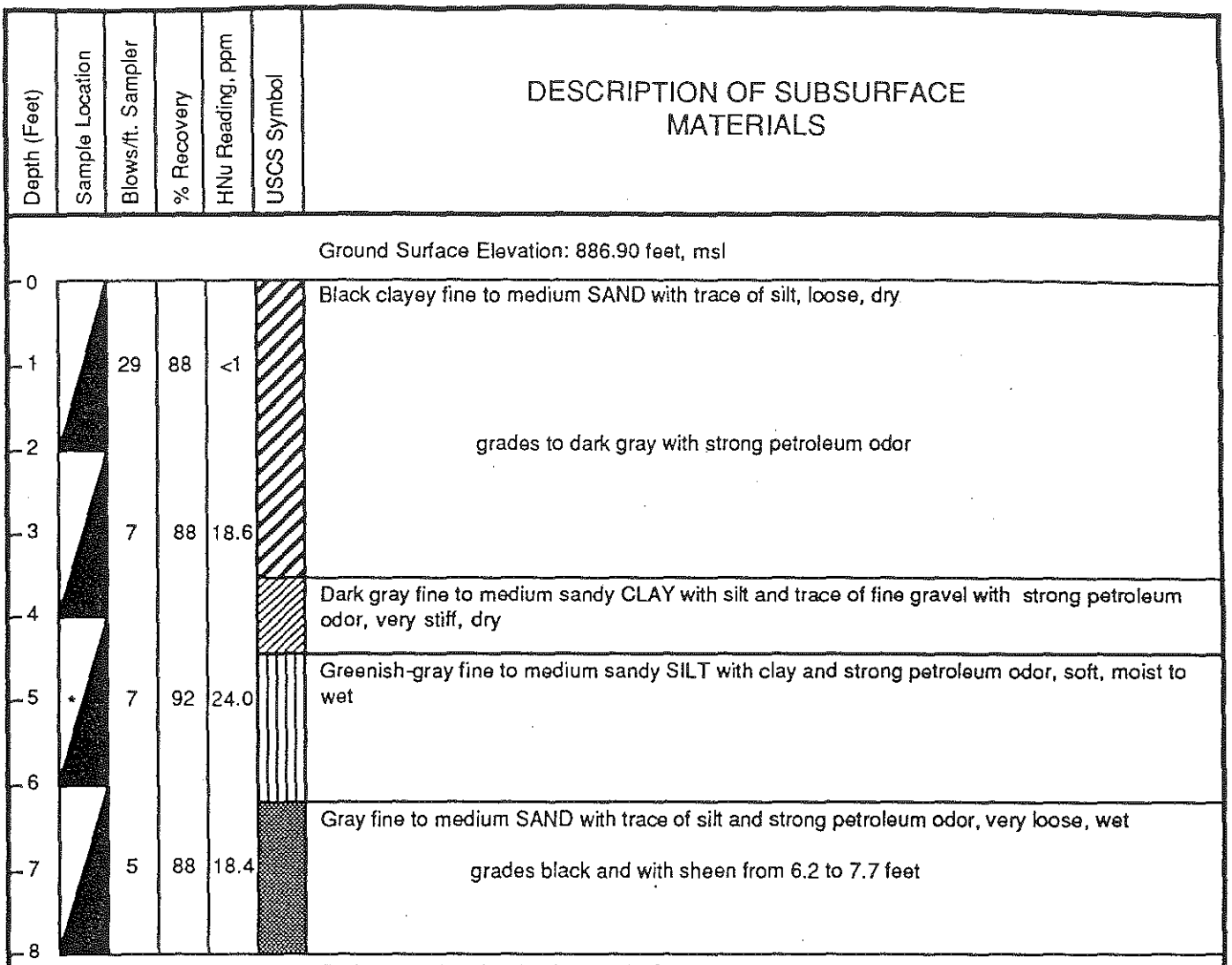
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING GB-81



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-82

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.76 feet, msl
0						Brown fine to coarse sandy CLAY with trace of silt, stiff, moist
1		16	100	1.4		
2						grades dark gray from 1.6 to 2.0 feet
3	*	9	88	7.4		grades greenish-gray with strong petroleum odor at 2.6 feet grades mottled brownish-yellow at 2.9 feet
4						grades to gray mottling at 3.4 feet
5		12	96	4.8		
6						Boring completed at 6.0 feet on 1/23/94. Boring grouted to surface with cement/bentonite grout on1/23/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-83

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.35 feet, msl
0						Brown silty CLAY with trace of fine sand
1		12	88	<1		Reddish-brown silty fine to medium SAND with trace of clay, dense moist to dry
2						grades with wood particles at 1.5 feet
3	*	8	92	10.0		Dark gray to black silty CLAY with trace of fine sand with strong petroleum odor, medium stiff, moist
4						grades mottled brownish-yellow and gray fine sand with and petroleum odor at 4.0 feet
5		7	92	14.2		grades to gray with black streaks at 5.5 feet
6						Boring completed at 6.0 feet on 1/23/94. Boring grouted to surface with cement/bentonite grout on1/23/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-84

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.49 feet, msl
0						Brown silty CLAY with fine to medium sand, medium stiff
1		9	83	<1		grades without silt
2						
3		4	75	<1		
4						grades with more fine to medium sand
5	*	3	83	1.0		grades greenish-gray mottled reddish-brown and yellowish-red from 4.5 to 5.8 feet
6						grades to greenish-gray from 5.0 to 5.8 feet
						Boring completed at 6.0 feet on 1/23/94.
						Boring grouted to surface with cement/bentonite grout on1/23/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING GB-85

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.78 feet, msl
0						Brown to black silty CLAY with some fine to coarse sand and trace of fine gravel, stiff, dry to moist
1		29	100	1.2		grades to dark gray and black from 0.8 to1.8 feet
2	*					grades to black with more fine sand from 1.8 to 2.9 feet
3		7	83	<1		grades to brownish-yellow and gray mottled black at 2.9 feet
4						
5		9	92	<1		grades to gray
6						

Boring completed at 6.0 feet on 1/23/94.
Boring grouted to surface with cement/bentonite grout on1/23/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-86

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.80 feet, msl
0						Brown fine to medium sandy CLAY with trace of silt and roots, stiff, dry
1		31	92	<1		
2						Yellowish-brown silty very fine to fine SAND, loose, dry
3		5	92	<1		grades to moist
4						
5	*	2	88	<1		grades to black tint at 5.5 feet, wet
6						Boring completed at 6.0 feet on 1/22/94. Boring grouted to surface with cement/bentonite grout on1/22/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-87

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.36 feet, msl
0						Brown and black silty fine to medium SAND, loose, dry
1		25	92	20.0		Greenish-gray silty CLAY with some fine to medium sand and trace of fine gravel and wood and petroleum odor, medium stiff, moist
2						
3		13	54	24.0		
4						Brown clayey fine to coarse SAND with some fine to medium gravel and trace of silt with petroleum odor, soft, moist
5	*	6	75	10.2		grades with less clay at 5.7 feet
6						Boring completed at 6.0 feet on 1/24/94. Boring grouted to surface with cement/bentonite grout on1/24/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

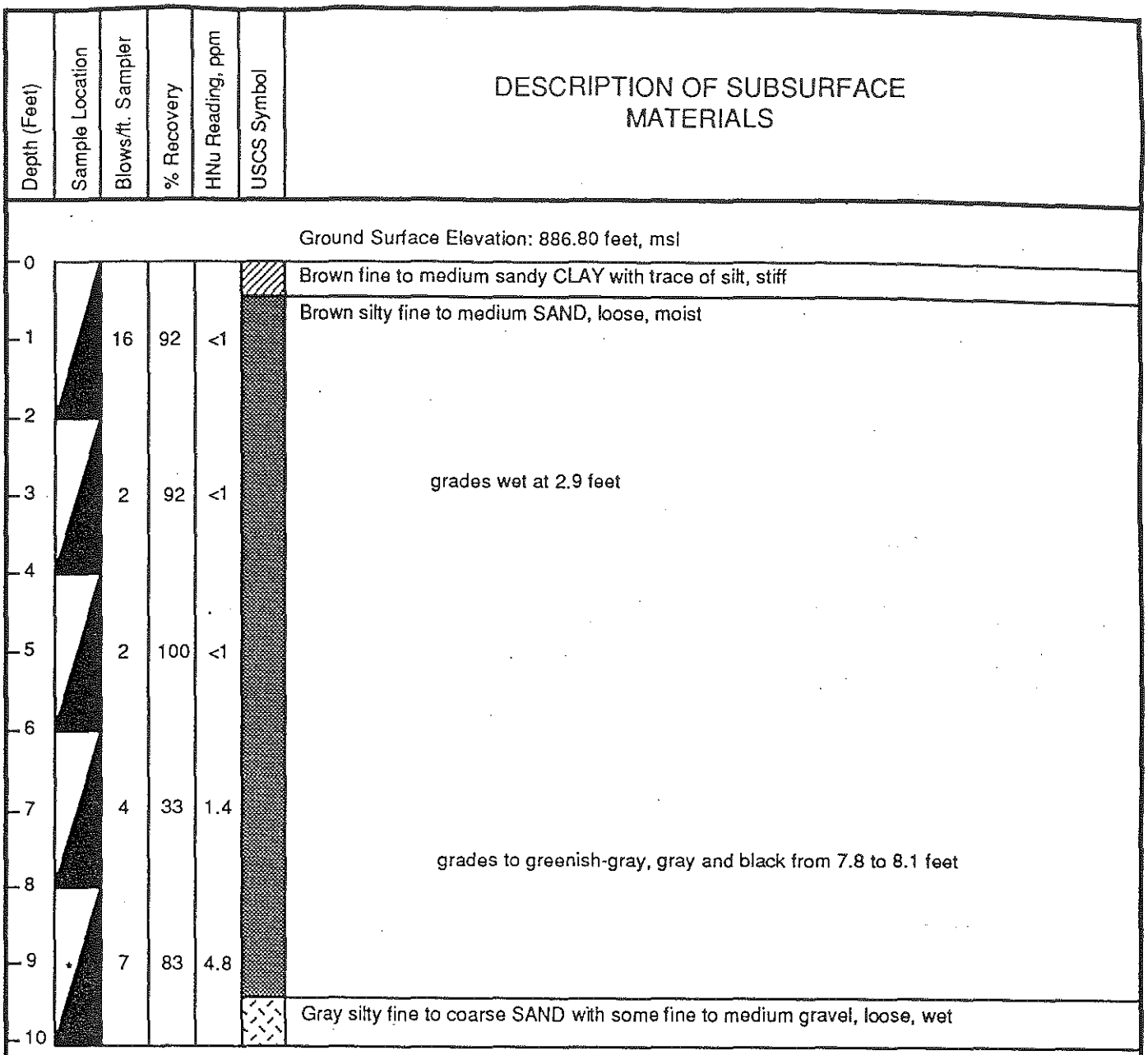
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-88



LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-89

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.63 feet, msl
0						Brown silty CLAY with some fine to medium sand, fine to medium gravel, and trace of roots, stiff, moist
1		56	92	<1		
2						grades with more fine sand
3	*	7	92	2.2		grades black and without gravel from 3.2 to 3.8 feet
4						grades mottled yellowish-brown and gray with more fine sand at 3.8 feet
5		2	88	<1		
6						Boring completed at 6.0 feet on 1/22/94. Boring grouted to surface with cement/bentonite grout on1/22/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-90

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.20 feet, msl
0						Mottled brown and green fine to medium SAND with some silt and trace of clay, fine to medium gravel and organic material
1	*	NC	NC	<1		
						grades mottled gray and brown
2						grades to dark gray from 2.0 to 2.4 feet
3		NC	NC	<1		
						grades with more silt and clay
4						grades with more fine to medium sand and gravel
5		NC	NC	<1		grades to black
						grades to gray coarse sand and without organic material
6						Boring completed at 6.0 feet on 2/6/94. Boring backfilled with auger cuttings on 2/6/94.

LEGEND:

Hand Auger Sample

* Sample Selected for Laboratory Analysis

NC Not Collected

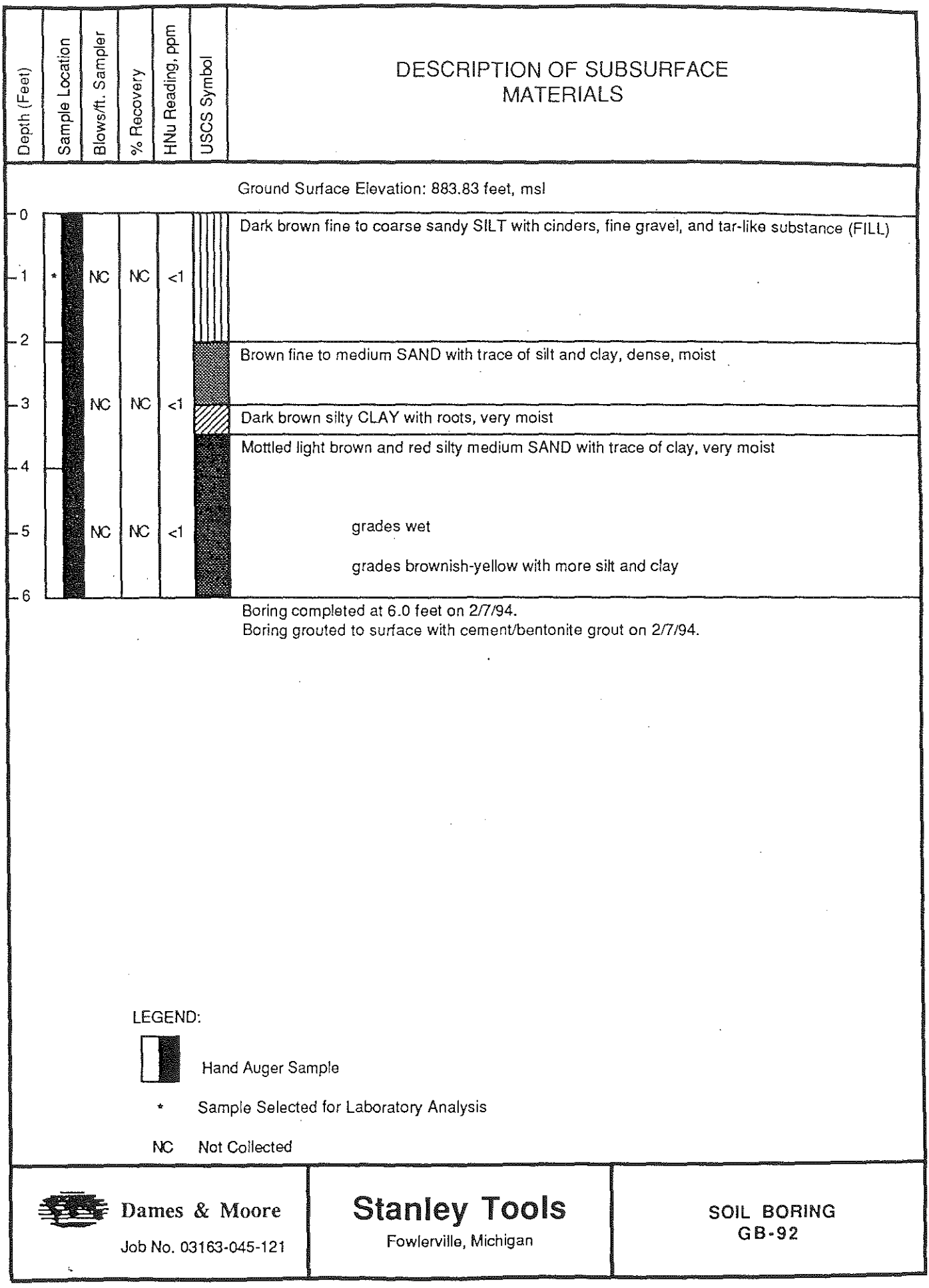
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-91


Depth (Feet)
Sample Location
Blows/ft. Sampler
% Recovery
HNu Reading, ppm
USCS Symbol
DESCRIPTION OF SUBSURFACE MATERIALS
Ground Surface Elevation: 883.83 feet, msl
0
1
2
3
4
5
6
*
NC
NC
<1
Dark brown fine to coarse sandy SILT with cinders, fine gravel, and tar-like substance (FILL)
Brown fine to medium SAND with trace of silt and clay, dense, moist
Dark brown silty CLAY with roots, very moist
Mottled light brown and red silty medium SAND with trace of clay, very moist
grades wet
grades brownish-yellow with more silt and clay
Boring completed at 6.0 feet on 2/7/94.
Boring grouted to surface with cement/bentonite grout on 2/7/94.
LEGEND:
Hand Auger Sample
* Sample Selected for Laboratory Analysis
NC Not Collected
Dames & Moore
Job No. 03163-045-121
Stanley Tools
Fowlerville, Michigan
SOIL BORING
GB-92

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 886.85 feet, msl
0						
1	*	NC	NC	<1		Mottled dark brown and orange clayey fine to medium SAND with some clay, silt and gravel, moist
2						
3		NC	NC	<1		grades to orangish-brown with more silt and clay, very moist to wet
4						
5		NC	NC	<1		
6						Boring completed at 6.0 feet on 2/8/94. Boring grouted to surface with cement/bentonite grout on 2/8/94.

LEGEND:

Hand Auger Sample

* Sample Selected for Laboratory Analysis

NC Not Collected

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-93

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 885.14 feet, msl
0						Reddish-brown medium sandy CLAY with some silt, moist
1	*	NC	NC	<1		grades to dark gray from 1.0 to 1.5 feet
2						grades with more sand
3		NC	NC	<1		grades gray mottled orangish-brown, dense, very moist
4						Gray fine to medium SAND with some silt and clay, moist to wet
						grades brown with less medium sand and more silt and clay
5		NC	NC	<1		grades to wet
6						grades dense

Boring completed at 6.0 feet on 2/7/94.
Boring grouted to surface with cement/bentonite grout on 2/7/94.

LEGEND:

Hand Auger Sample

* Sample Selected for Laboratory Analysis

NC Not Collected

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-94

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 887.69 feet, msl
0						
1		12	92	<1		Mottled brown and yellow fine to medium SAND with trace of clay, silt, and fine gravel, medium dense, slightly moist
2	*					
3		8	100	<1		grades with dark orange and trace of green at 2.8 feet
4						
5		7	100	<1		grades light brown at 5.5 feet
6						

Boring completed at 6.0 feet on 1/22/94.
Boring grouted to surface with cement/bentonite grout on 1/22/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-95

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 887.70 feet, msl
0	*					Mottled brown with yellow silty CLAY with sand and gravel, medium stiff, moist
1		6	100	<1		
						grades mottled greenish-gray at 1.6 feet
2						
						grades light brown at 2.5 feet
3		6	83	<1		grades without gravel at 3.0 feet
4						
5		9	100	<1		
6						Gray medium to coarse SAND, loose, moist
						Boring completed at 6.0 feet on 1/22/94.
						Boring grouted to surface with cement/bentonite grout on 1/22/94.

LEGEND:

Split Spoon Sample

* Sample Selected from 1.5 to 2.5 feet for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-96

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 887.52 feet, msl
0						Brown fine to medium SAND with clay, silt, and fine gravel, loose, moist
1		5	100	2		
2						grades moist to wet at 1.8 feet
3		12	92	<1		grades with more fines and medium dense at 2.8 feet
4						grades mottled yellowish-orange at 3.3 feet
5		12	75	<1		
6						Boring completed at 6.0 feet on 1/22/94. Boring grouted to surface with cement/bentonite grout on 1/22/94.

LEGEND:

Split Spoon Sample

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

SOIL BORING
GB-97

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 887.36 feet, msl
0						Light brown medium to coarse SAND with clay, silt, and fine gravel, loose, moist
1		6	92	2.8		
2						grades moist to wet at 1.8 feet
						grades without gravel at 2.7 feet
3		4	75	4.8		
						grades mottled orange at 3.2 feet
4	*					
5		14	92	20		
6						

Boring completed at 6.0 feet on 1/22/94.
Boring grouted to surface with cement/bentonite grout on 1/22/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	SOIL BORING GB-98

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Ground Surface Elevation: 887.33 feet, msl
0						Mottled brown with orange medium SAND with clay, silt, and fine gravel, loose, dry to moist
1		8	67	1.0		
2		5	89	22		grades to mottled greenish-gray with orange at 1.6 feet petroleum odor, slightly moist at 1.6 feet
3	*					petroleum ordor from 3.0 to 5.0 feet
4		11	100	24		
5						petroleum odor from 5.0 to 7.0 feet
6		12	100	25		
7						grades to gray coarse sand and moist to wet at 6.8 feet

Boring completed at 7.0 feet on 1/23/94.
Boring grouted to surface with cement/bentonite grout on 1/23/94.

LEGEND:

Split Spoon Sample

* Sample Selected for Laboratory Analysis

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

SOIL BORING
GB-99

Depth (Feet)	Sample Location	% Recovery	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL
					Top of Inner Casing Elevation: 883.02 feet, msl Ground Surface Elevation: 880.84 feet, msl	
0		75	1		Brown to gray fine to medium SAND with clay, silt and humus, wet	4" Protective casing with locking cap Concrete pad Cement/bentonite grout
		50	5		grades with less clay, silt and humus	2.0' Bentonite seal 4.0'
5		50	4		grades with more clay and silt	2" I.D. type 304 stainless steel riser 5.0'
		67	5		grades with less clay and silt	8" diameter borehole Sand pack
		75	-		grades with coarse sand and some fine gravel	2" I.D.type 304 stainless steel 0.010" screen
10						10.0'
					Boring terminated at 10.0 feet on 1/28/94. Monitoring well installed at 10.0 feet on 1/28/94.	

LEGEND:

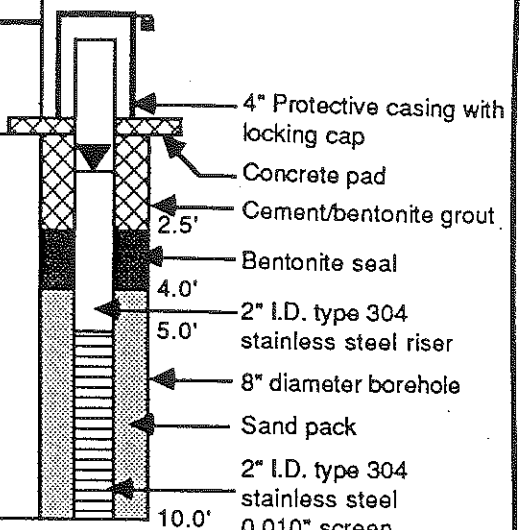
Split Spoon Sample - Not Recorded

Ground Water Level Measured at 3.30 Feet, msl
Referenced to Top of Casing on 2/8/94

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	**MONITORING WELL MW-OS1**

Depth (Feet)	Sample Location	% Recovery	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
					Top of Inner Casing Elevation: 883.62 feet, msl Ground Surface Elevation: 881.14 feet, msl
0		92	2		Dark brown to gray medium SAND with clay, silt and humus
		0	7		
5		67	8		grades gray with less clay and silt
		92	8		grades with fine gravel
		83	9		
10					Boring terminated at 10.0 feet on 1/28/94. Monitoring well installed at 10.0 feet on 1/28/94.

WELL CONSTRUCTION DETAIL



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 3.48 Feet, msl
Referenced to Top of Casing on 2/8/94

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

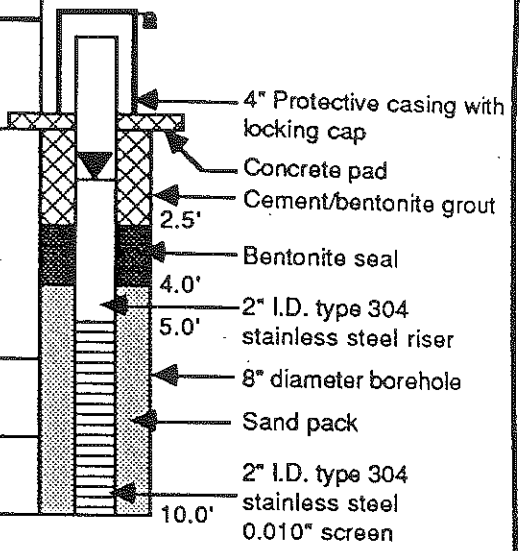
MONITORING WELL MW-OS2

Depth (Feet)	Sample Location	% Recovery	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		75	6		Brown to gray medium SAND with clay, silt and humus
		33	1		grades with less clay and silt, wet
5		50	0		grades to gray with more clay and silt
		50	1		grades with less clay and silt
					Gray sandy, silty CLAY, wet
10		50	0		Gray SAND, wet

Top of Inner Casing Elevation: 884.15 feet, msl
Ground Surface Elevation: 881.33 feet, msl

Boring terminated at 10.0 feet on 1/28/94.
Monitoring well installed at 10.0 feet on 1/28/94.

WELL CONSTRUCTION DETAIL



LEGEND:

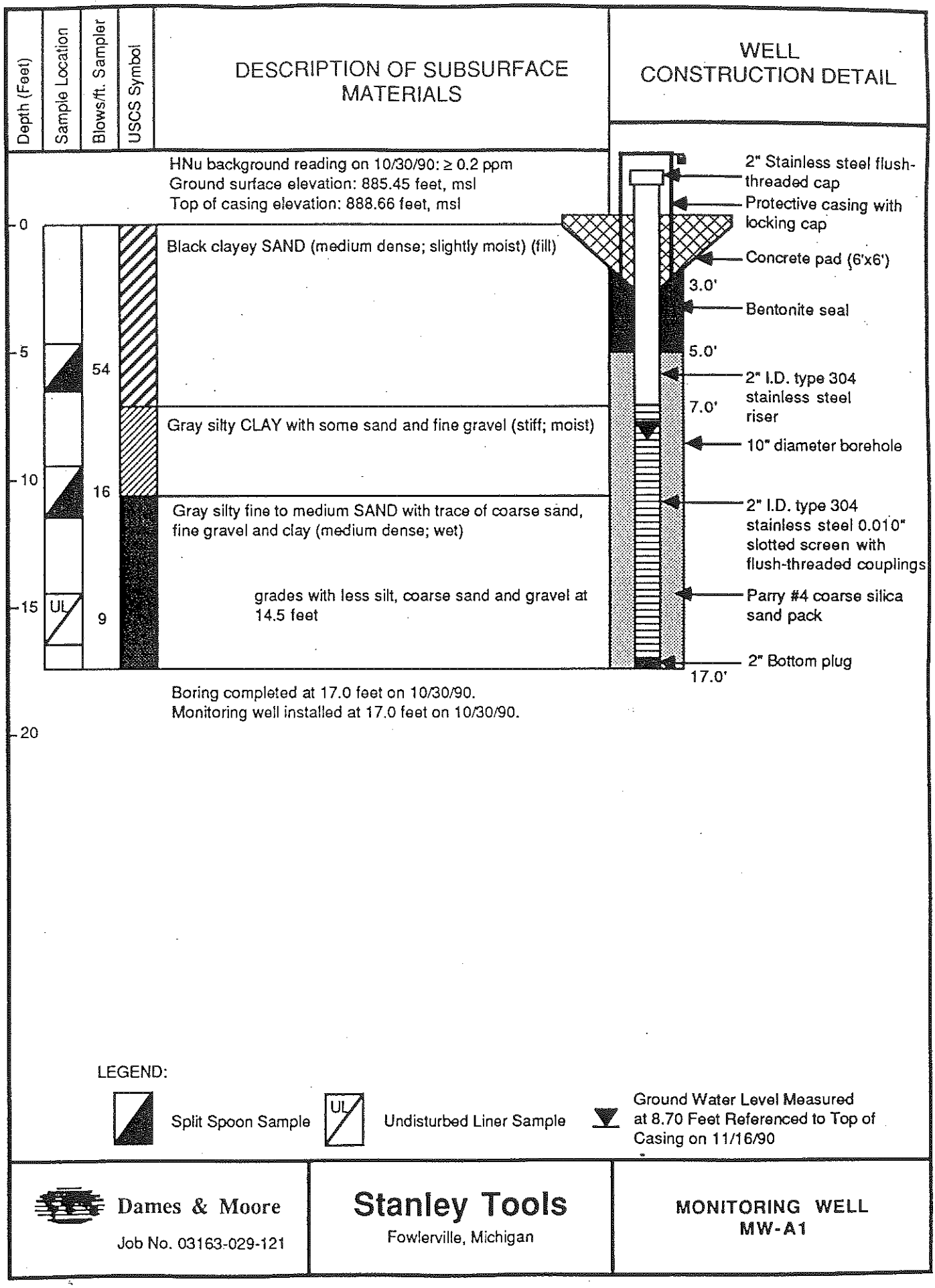
Split Spoon Sample

Ground Water Level Measured at 4.26 Feet, msl
Referenced to Top of Casing on 2/8/94

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL MW-OS3



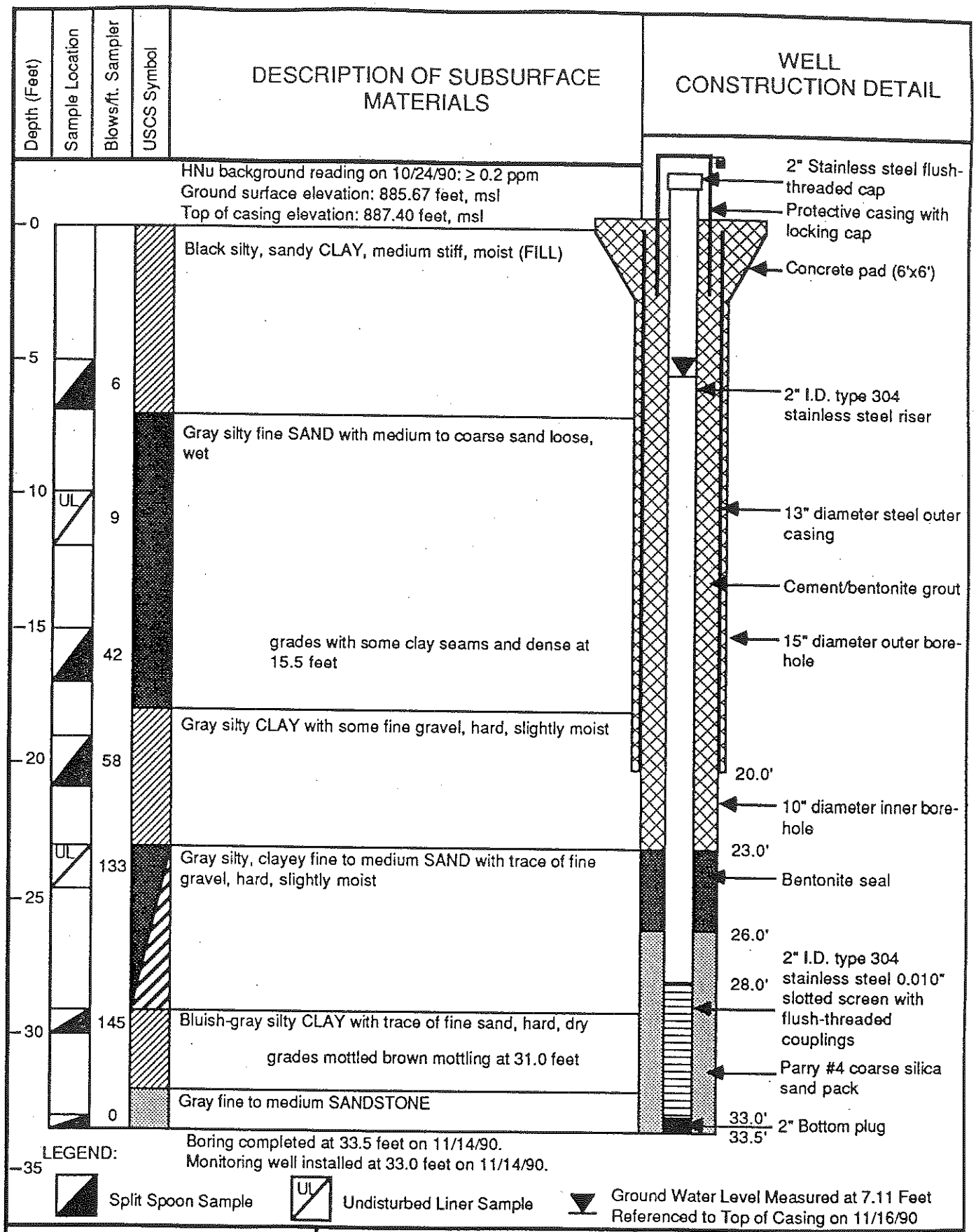
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-A1



Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-A2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/15/90: 0.2 ppm
Ground surface elevation: 885.67 feet,msl
Top of casing elevation: 887.09 feet, msl

0

See MW-A2 for soil descriptions

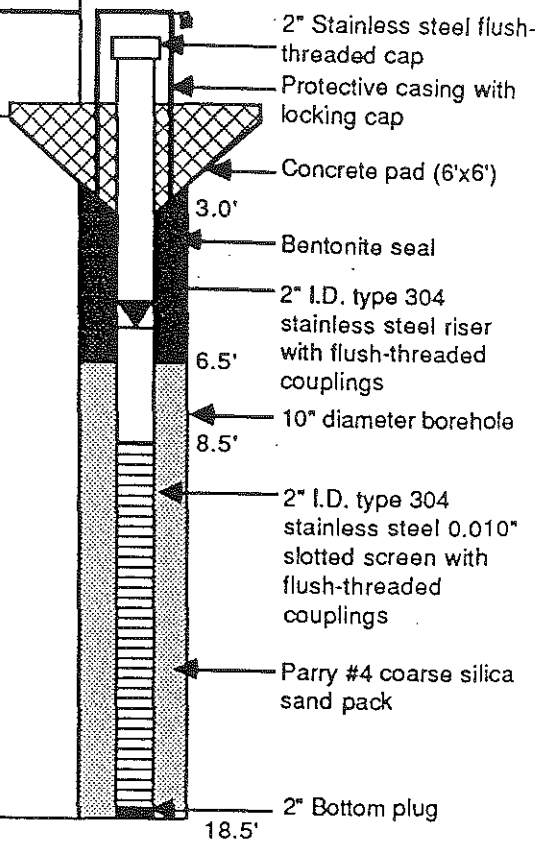
5

10

15

20

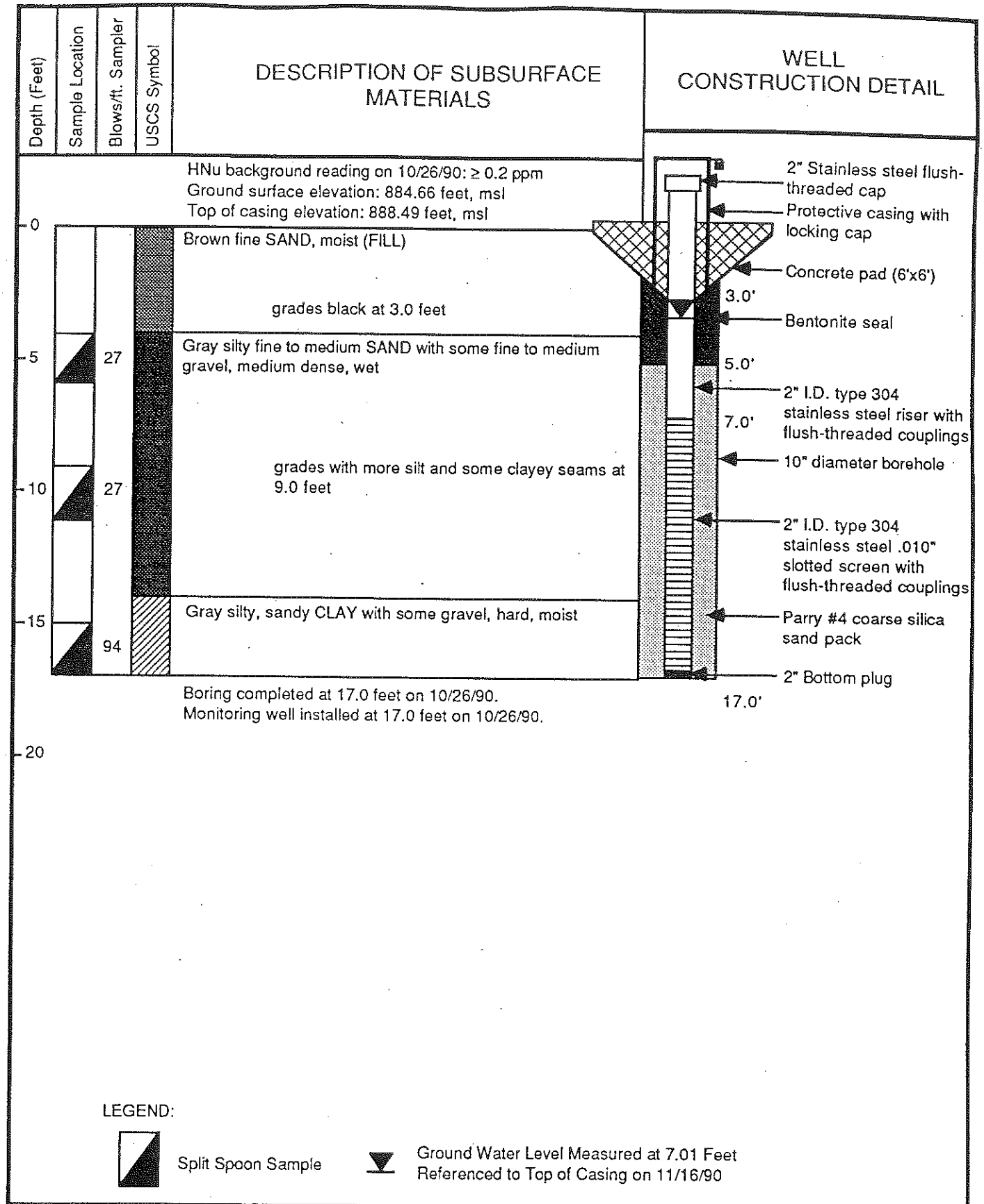
Boring completed at 18.5 feet on 11/15/90.
Monitoring well installed at 18.5 feet on 11/15/90.



LEGEND:

Ground Water Level Measured at 7.07 Feet
Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL **MW-A3**



Dames & Moore

Job No. 03163-029-121

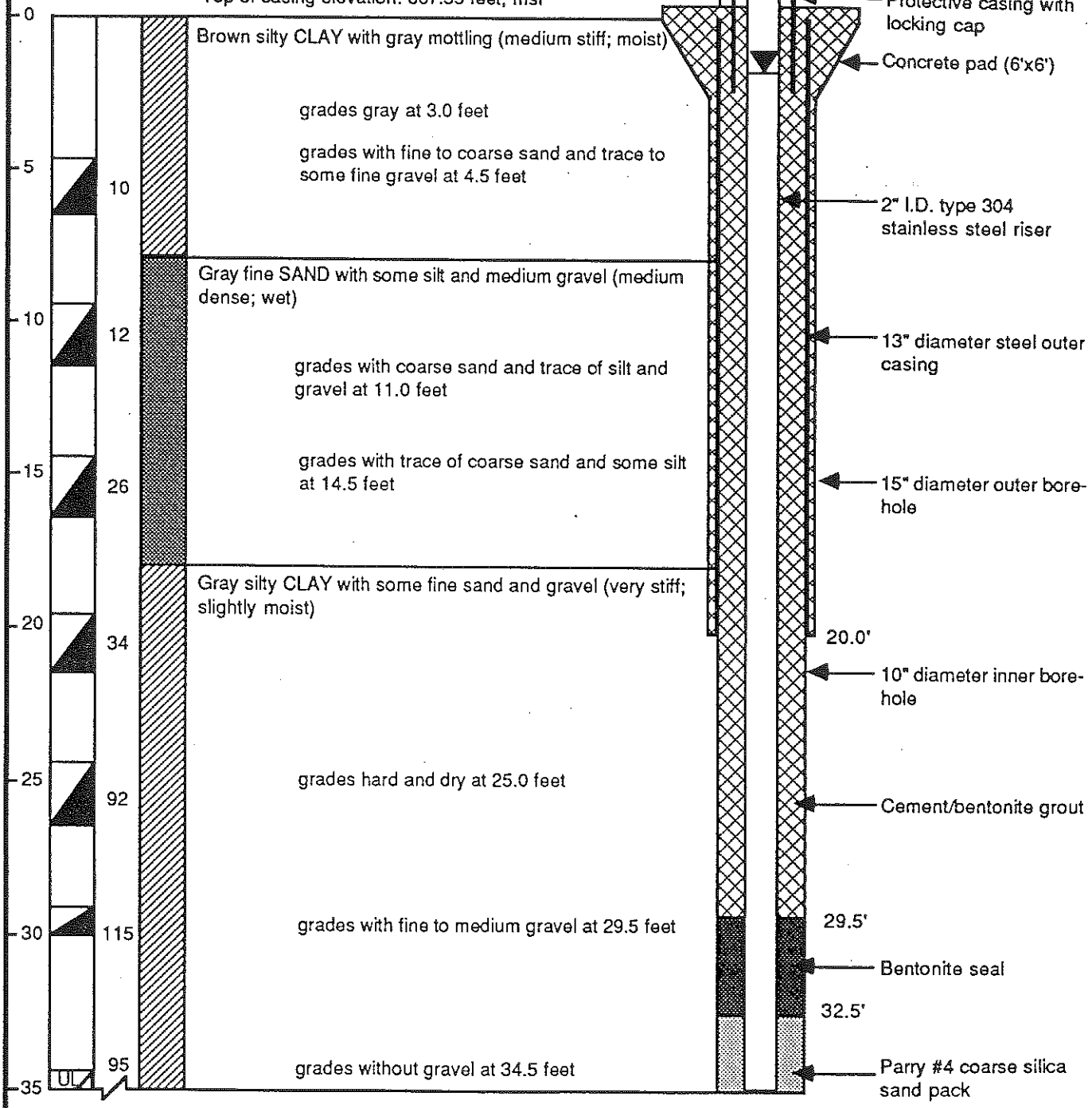
Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-A4

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 10/22/90: ≥ 0.2 ppm
HNu background reading on 11/2/90: ≥ 0.2 ppm
Ground surface elevation: 885.00 feet, msl
Top of casing elevation: 887.55 feet, msl

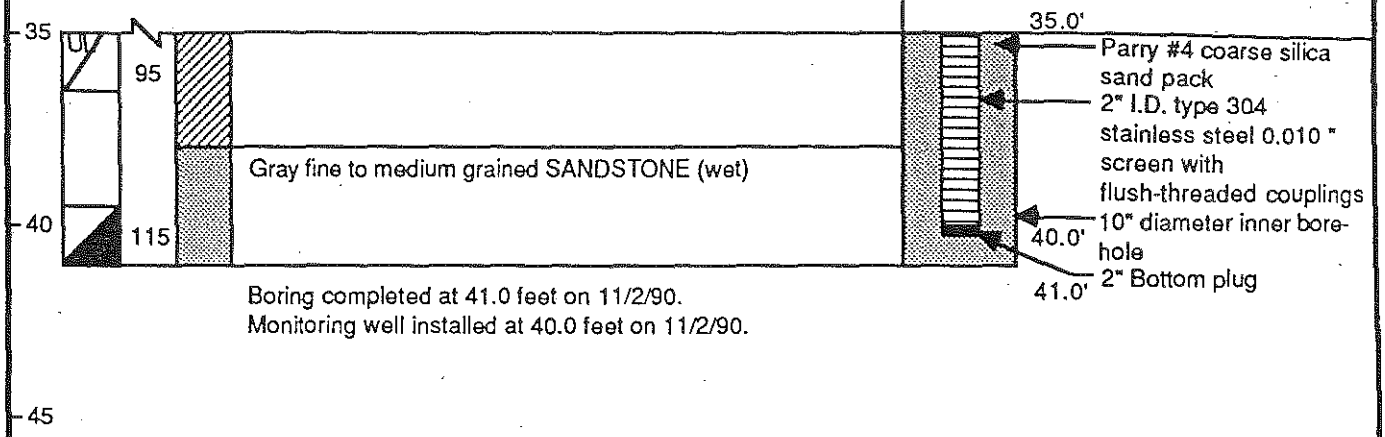


Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL MW-BCK2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL



Boring completed at 41.0 feet on 11/2/90.
Monitoring well installed at 40.0 feet on 11/2/90.

LEGEND:

Split Spoon Sample

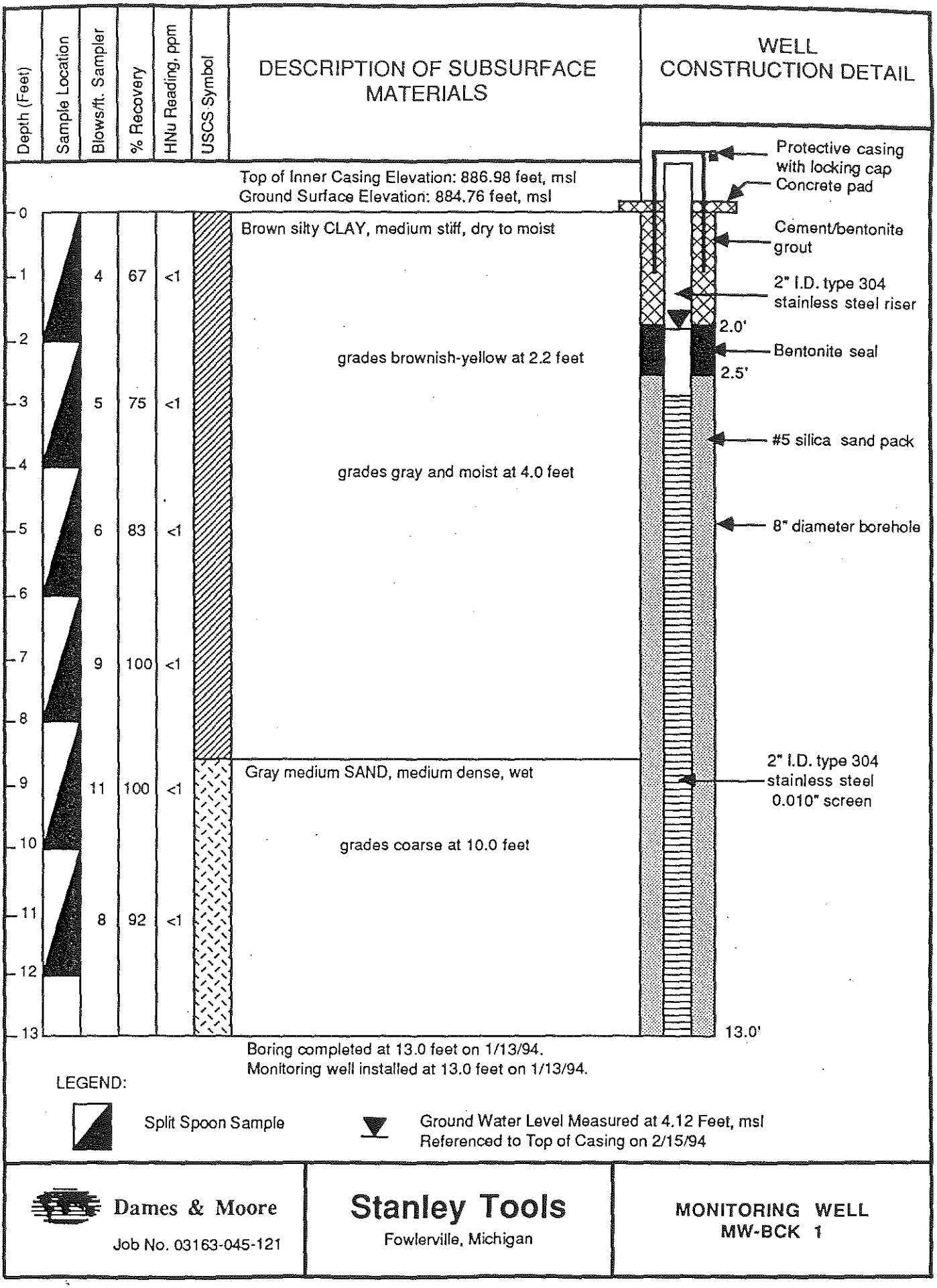
UL Undisturbed Liner Sample

Ground Water Level Measured at 4.4 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-BCK2



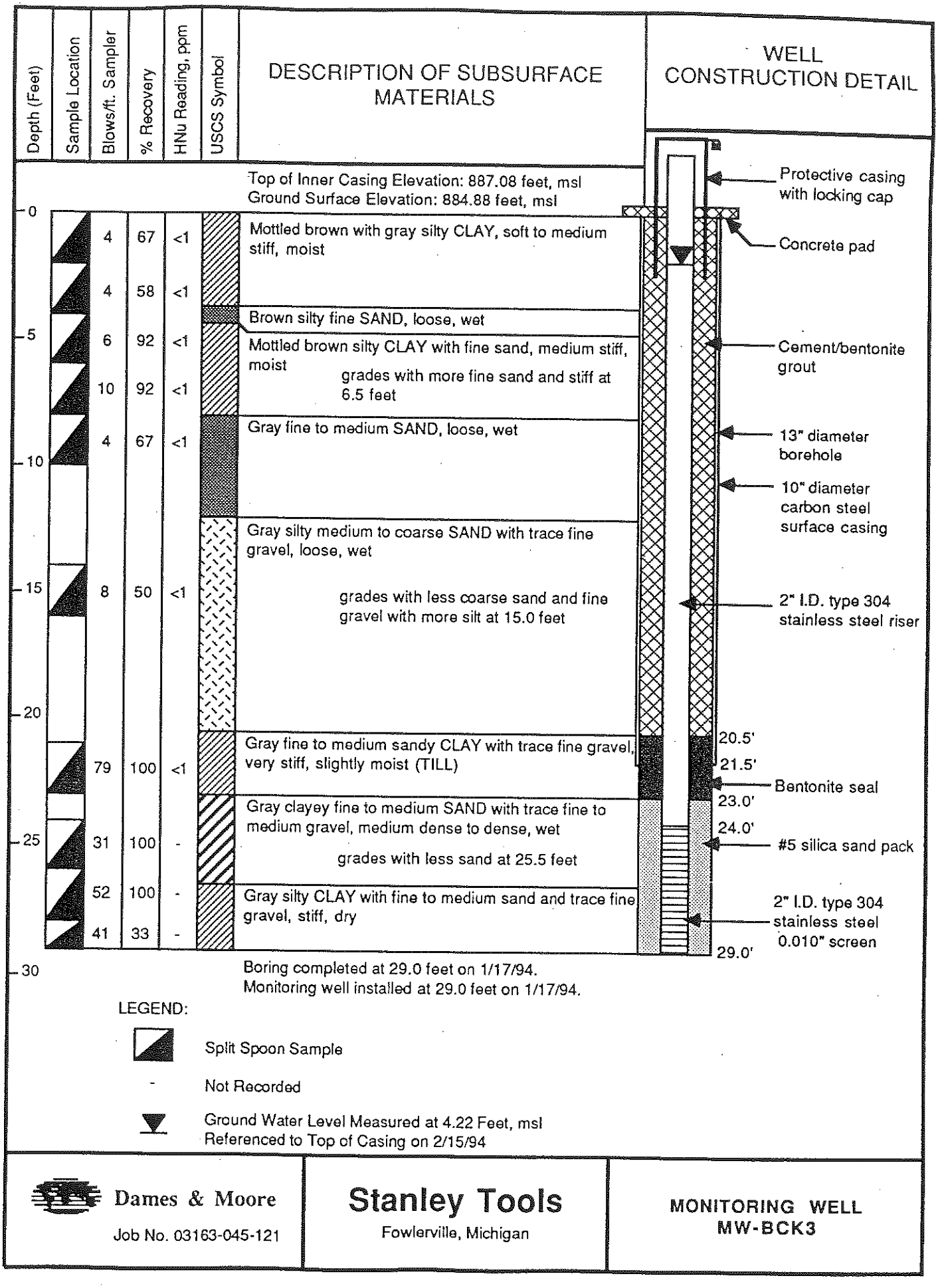
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-BCK 1



Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-BCK3

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/7/90: ≥ 0.2 ppm
Ground surface elevation: 886.31 feet, msl
Top of casing elevation: 888.83 feet, msl

0

See MW-B2 for soil descriptions

5

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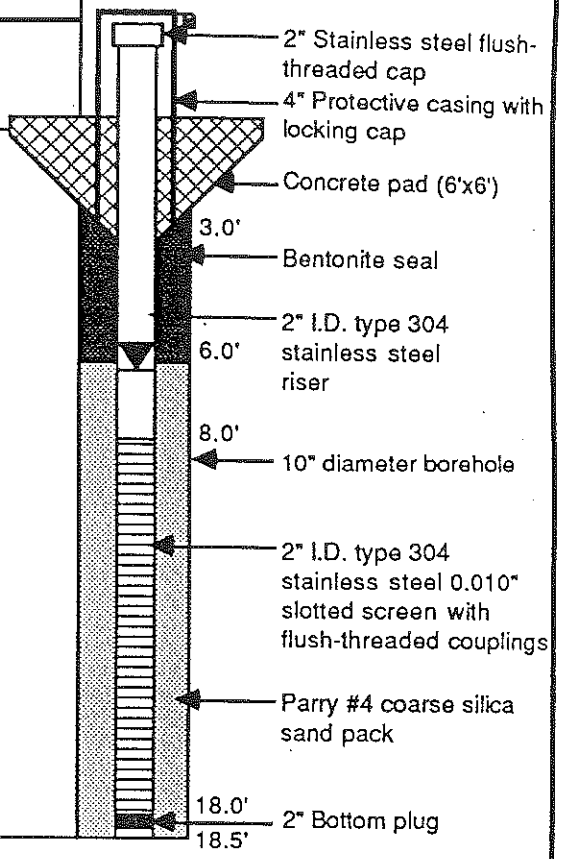


Boring completed at 18.5 feet on 11/7/90.
Monitoring well installed at 18.0 feet on 11/7/90.

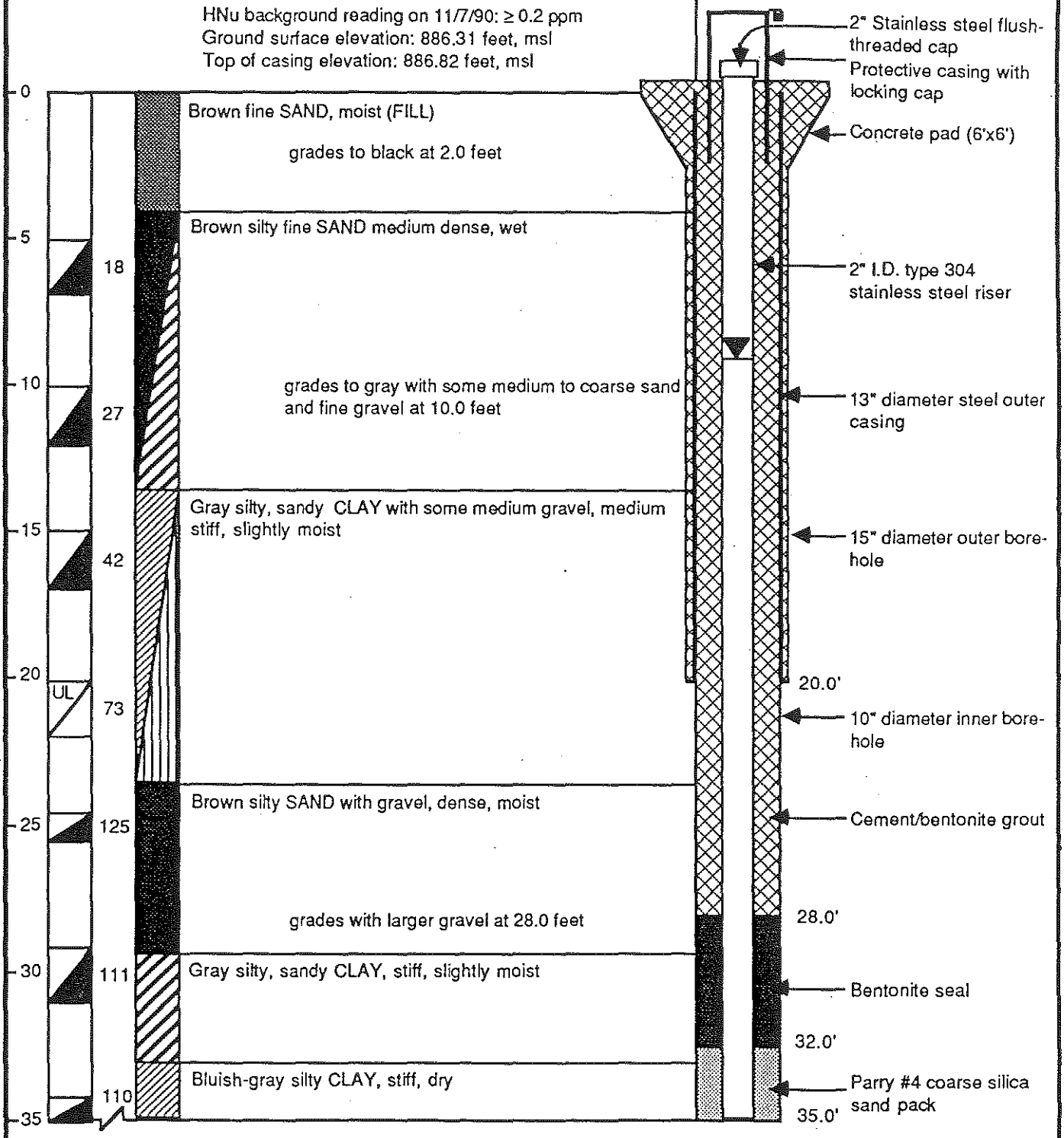
LEGEND:

▼ Ground Water Level Measured at 8.72 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-B1

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/7/90: ≥ 0.2 ppm
Ground surface elevation: 886.31 feet, msl
Top of casing elevation: 886.82 feet, msl

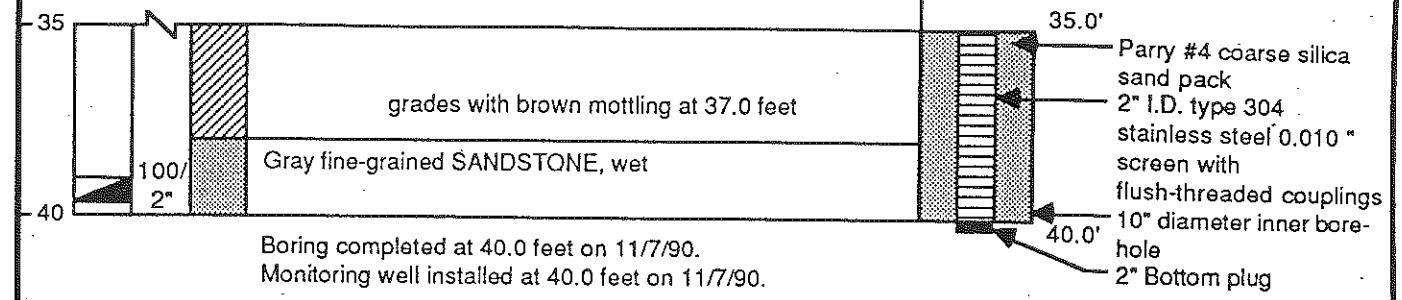


Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-B2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL
35				grades with brown mottling at 37.0 feet	35.0' Parry #4 coarse silica sand pack; 2" I.D. type 304 stainless steel 0.010 " screen with flush-threaded couplings; 10" diameter inner borehole
		100/2"		Gray fine-grained SANDSTONE, wet	
40				Boring completed at 40.0 feet on 11/7/90. Monitoring well installed at 40.0 feet on 11/7/90.	40.0' 2" Bottom plug
45					



LEGEND:

Split Spoon Sample

UL Undisturbed Liner Sample

Ground Water Level Measured at 9.10 Feet Referenced to Top of Casing on 11/16/90

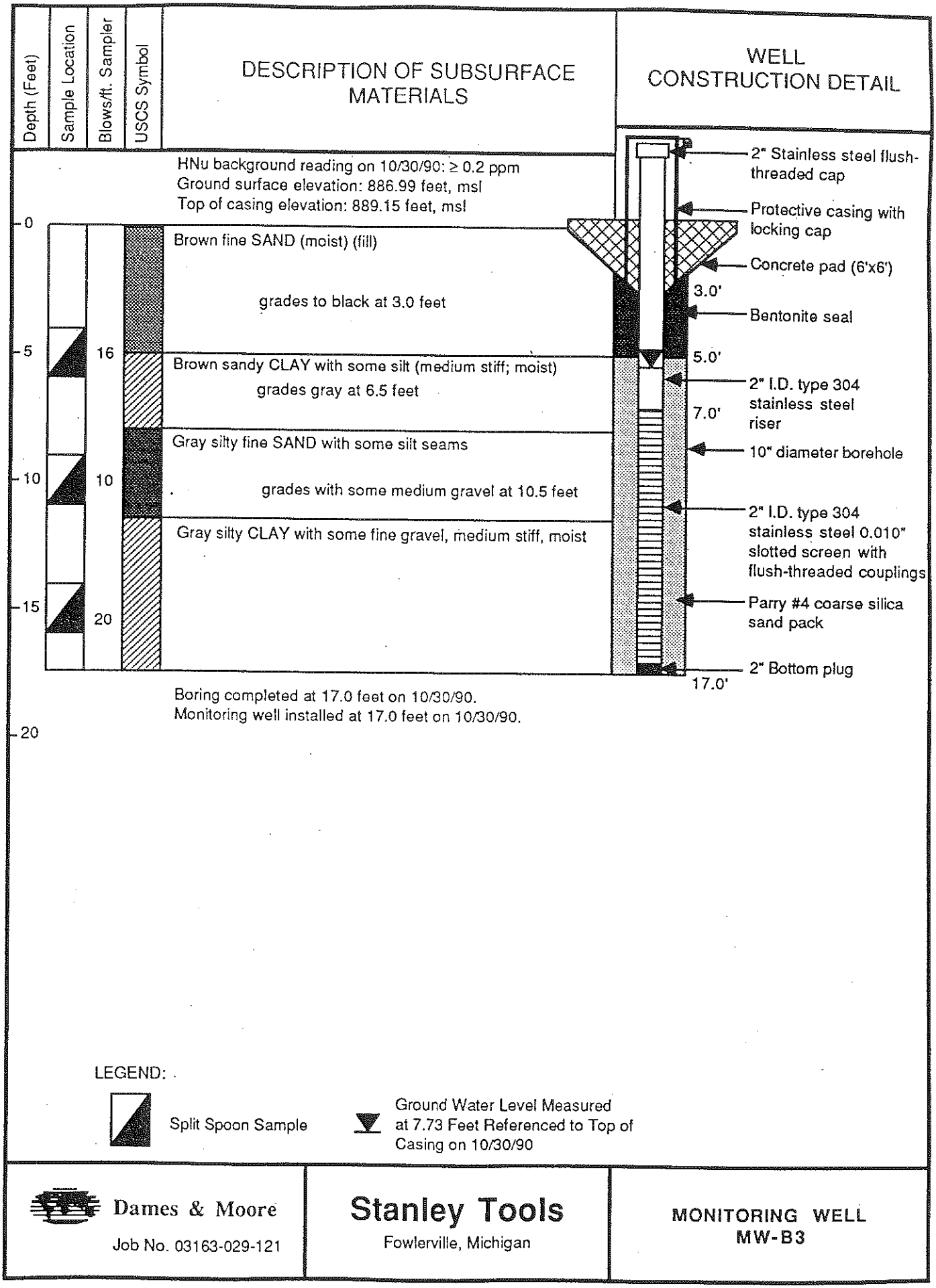
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-B2



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 7.73 Feet Referenced to Top of Casing on 10/30/90

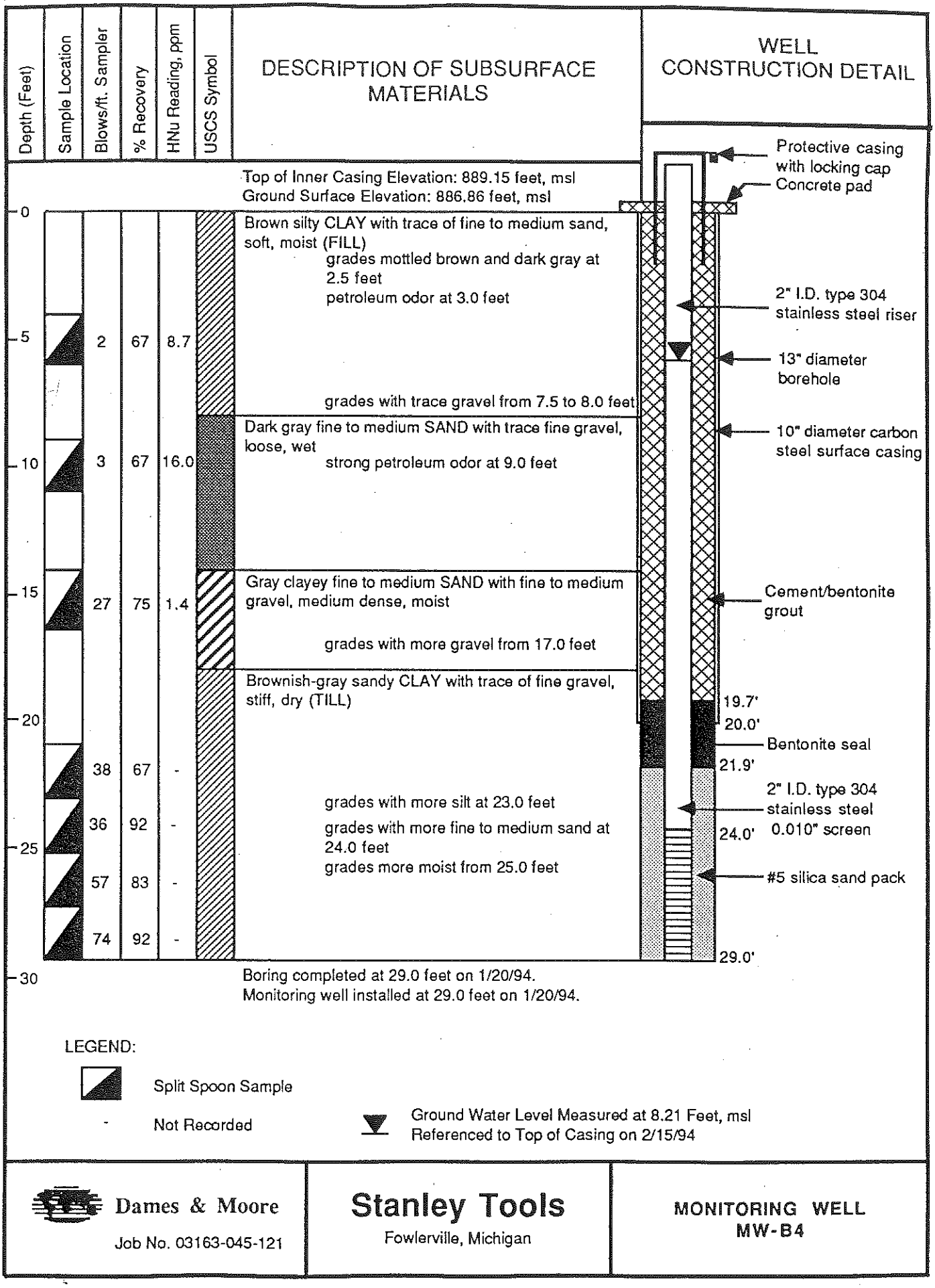
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-B3



Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-B4

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/8/90: ≥ 0.3 ppm
Ground surface elevation: 886.51 feet, msl
Top of casing elevation: 888.80 feet, msl

0

See MW-C2 for soil descriptions

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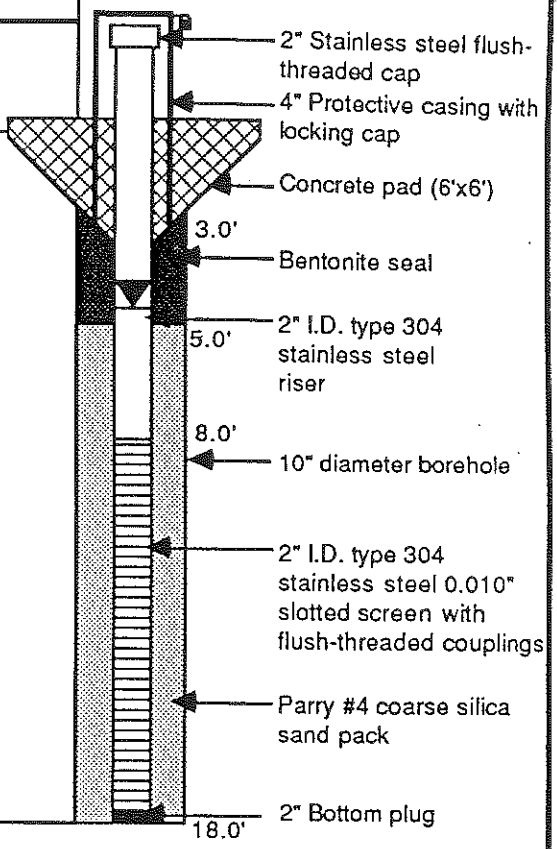
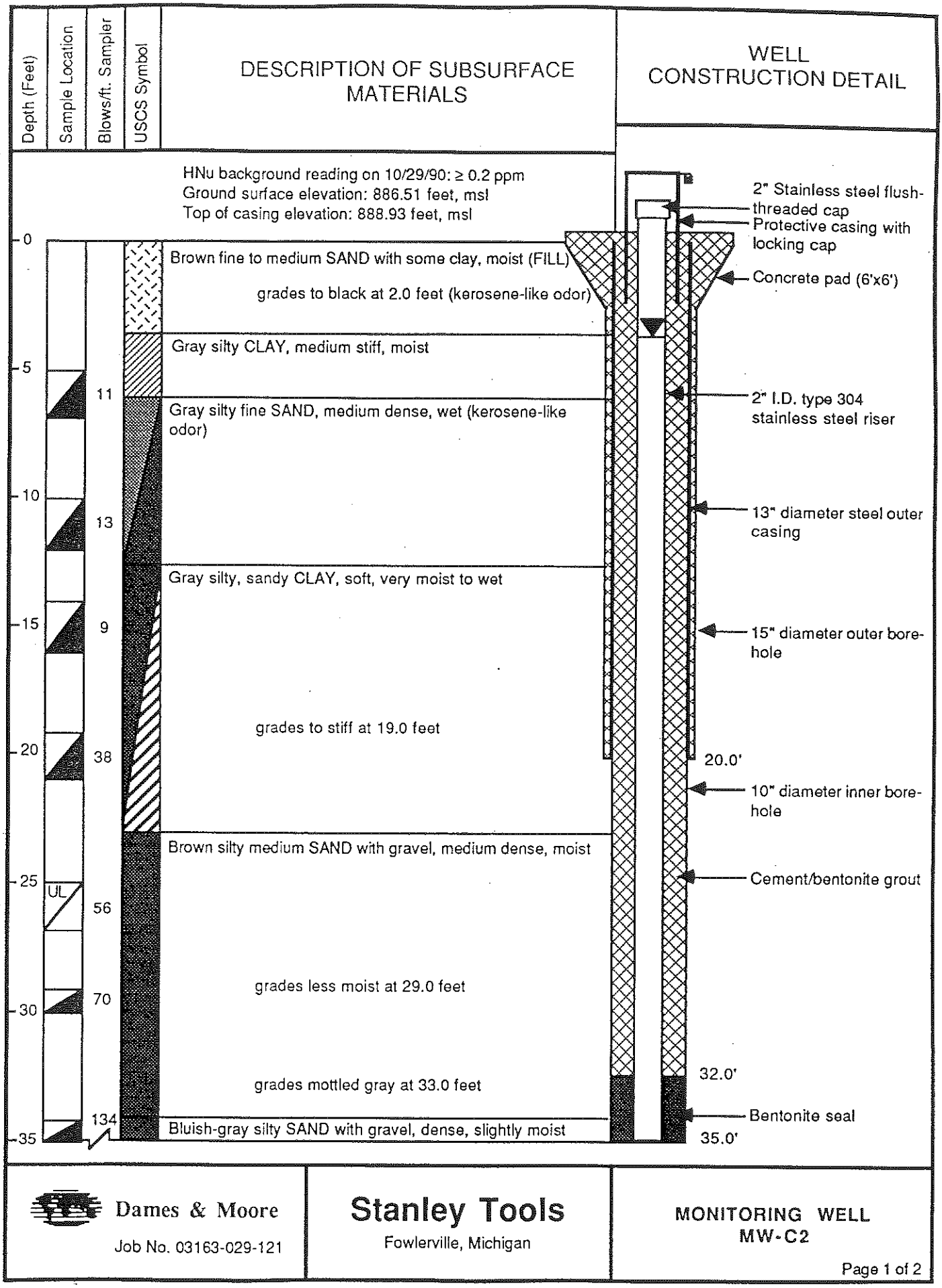
Boring completed at 18.0 feet on 11/8/90.
Monitoring well installed at 18.0 feet on 11/8/90.



LEGEND:

▼ Ground Water Level Measured at 6.44 Feet Referenced to Top of Casing on 11/8/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-C1



Dames & Moore

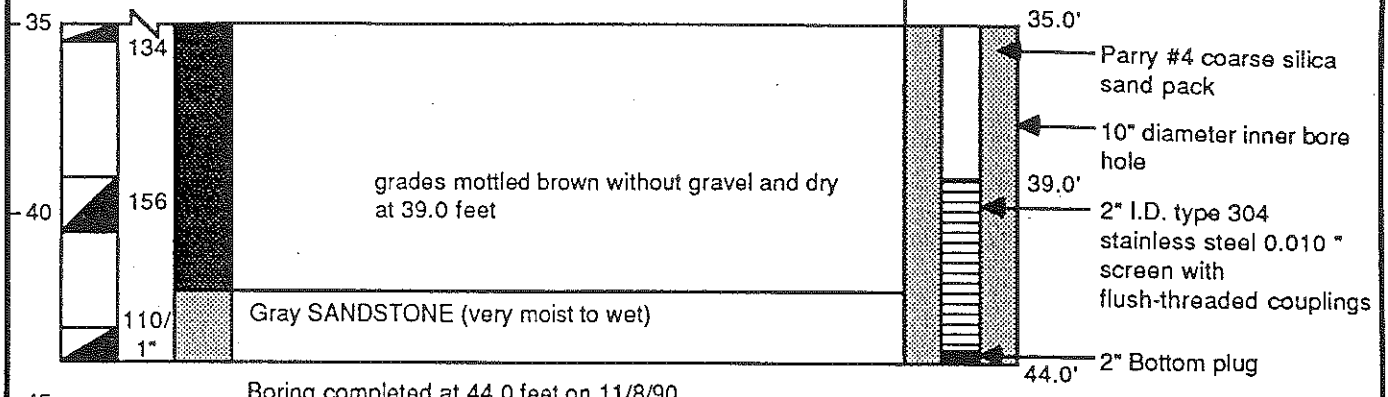
Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-C2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL
35		134		grades mottled brown without gravel and dry at 39.0 feet	35.0' Parry #4 coarse silica sand pack; 10" diameter inner bore hole
40		156			39.0' 2" I.D. type 304 stainless steel 0.010 " screen with flush-threaded couplings
		110/1"		Gray SANDSTONE (very moist to wet)	44.0' 2" Bottom plug
45				Boring completed at 44.0 feet on 11/8/90. Monitoring well installed at 44.0 feet on 11/8/90.	



LEGEND:

Split Spoon Sample

UL Undisturbed Liner Sample

Ground Water Level Measured at 6.92 Feet Referenced to Top of Casing on 11/16/90

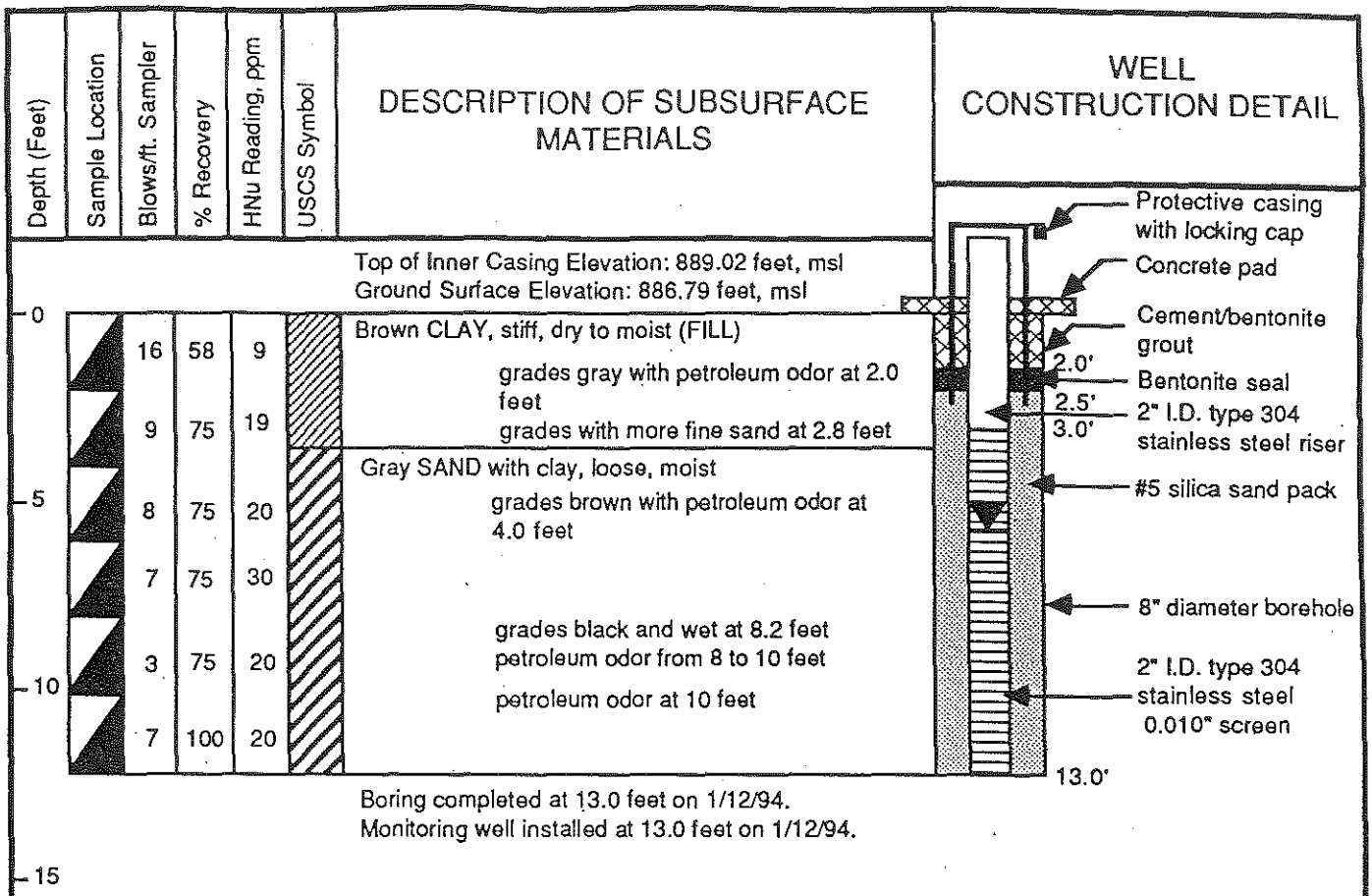
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-C2



Boring completed at 13.0 feet on 1/12/94.
Monitoring well installed at 13.0 feet on 1/12/94.

LEGEND:

Split Spoon Sample

Ground Water Level Measured at 7.92 Feet, msl
Referenced to Top of Casing on 2/8/94

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-C3

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/6/90: ≥ 0.2 ppm
Ground surface elevation: 885.69 feet, msl
Top of casing elevation: 888.65 feet, msl

0

See MW-E2 for soil descriptions

5

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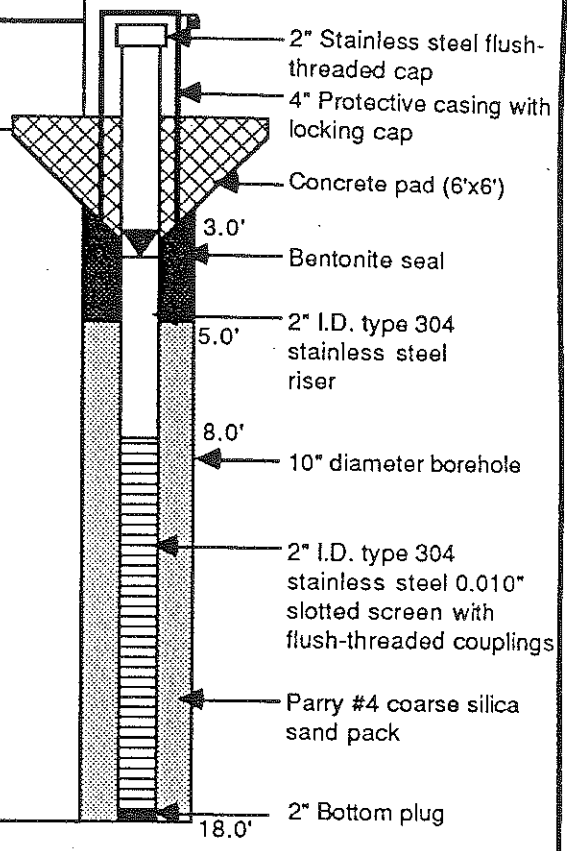
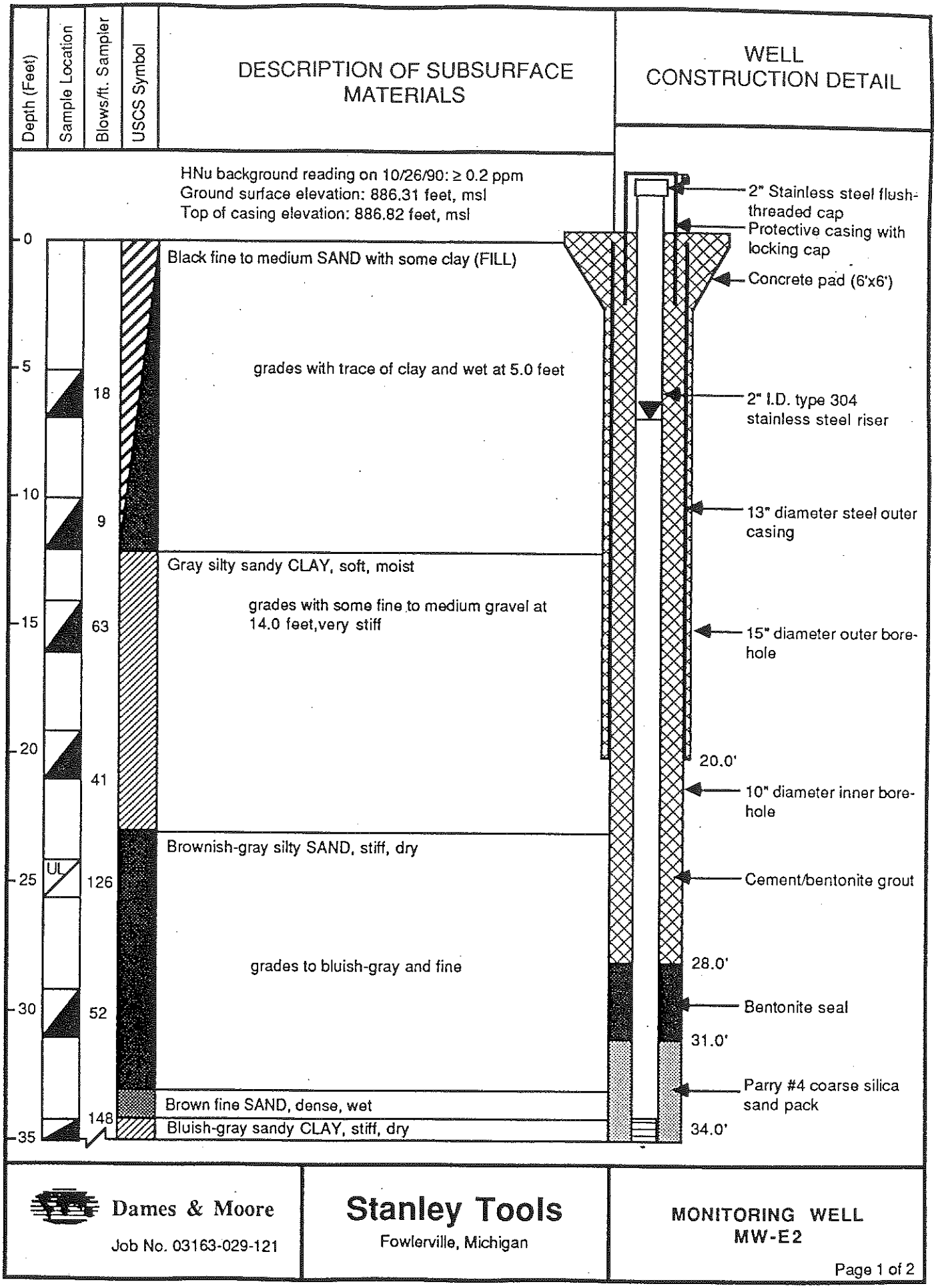
Boring completed at 18.0 feet on 11/6/90.
Monitoring well installed at 18.0 feet on 11/6/90.



LEGEND:

▼ Ground Water Level Measured at 6.56 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-E1



Dames & Moore

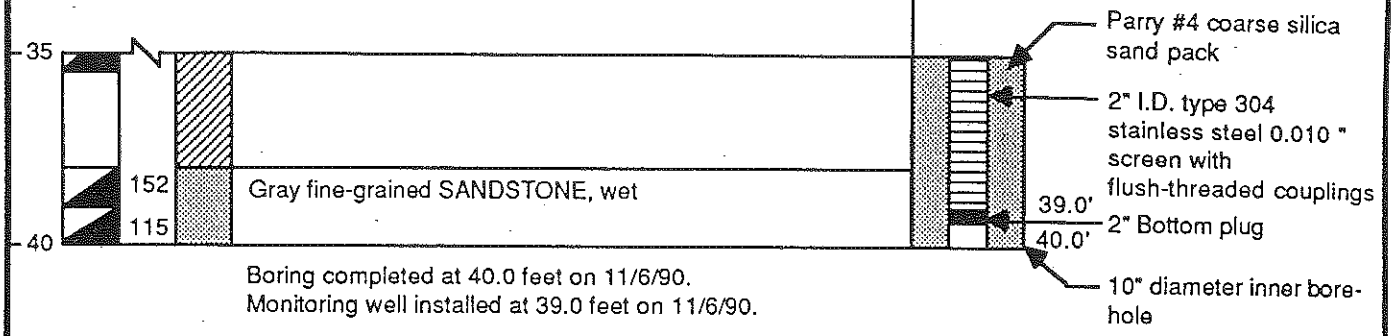
Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-E2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL
35					
		152		Gray fine-grained SANDSTONE, wet	
40		115			



Boring completed at 40.0 feet on 11/6/90.
Monitoring well installed at 39.0 feet on 11/6/90.

LEGEND:

Split Spoon Sample

UL Undisturbed Liner Sample

Ground Water Level Measured at 7.68 Feet Referenced to Top of Casing on 11/16/90

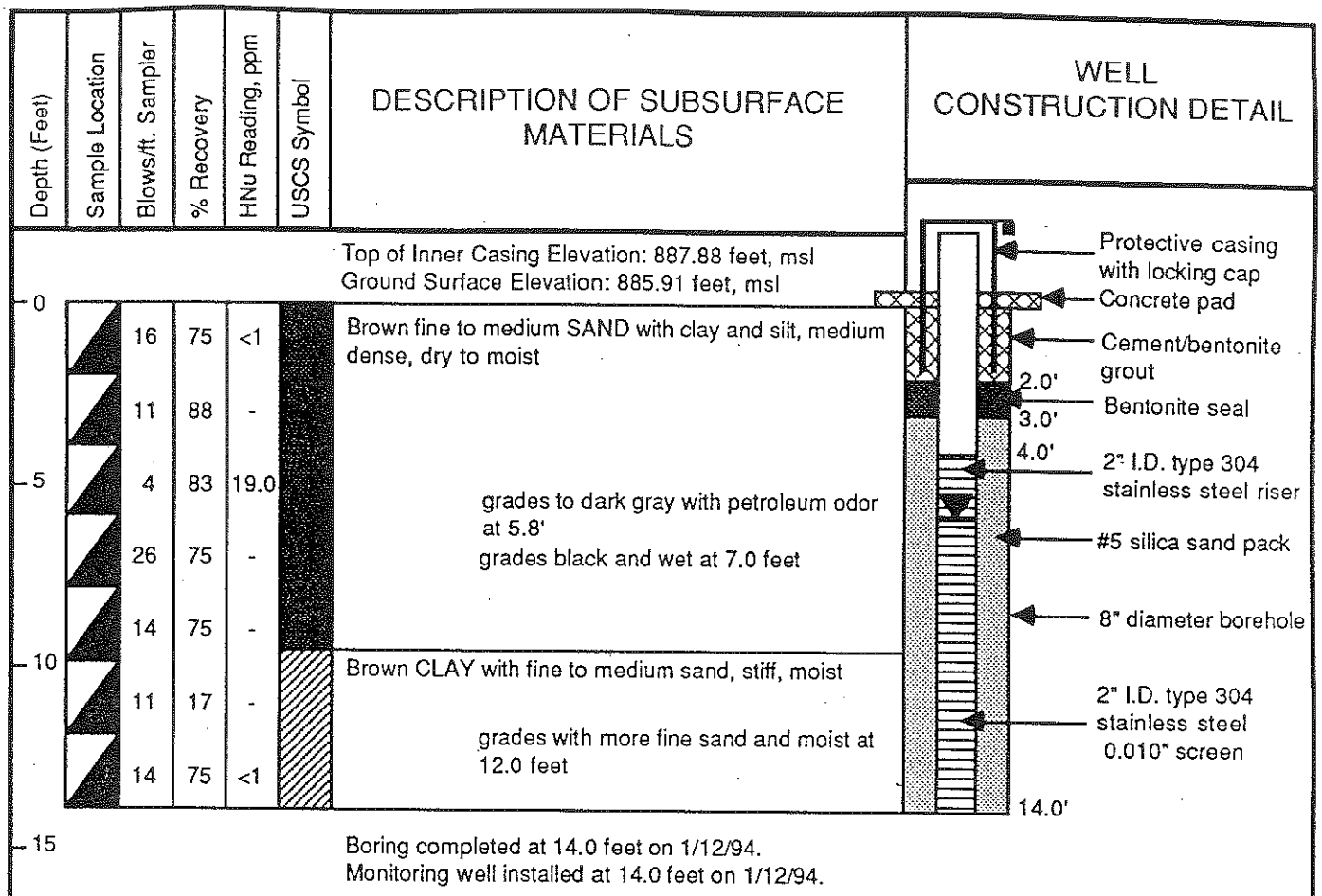
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-E2



LEGEND:

Split Spoon Sample

\- Not Recorded

Ground Water Level Measured at 7.71 feet, above msl
Referenced to Top of Casing on 2/15/94

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-E3

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 10/23/90: ≥ 0.2 ppm
Ground surface elevation: 881.74 feet, msl
Top of casing elevation: 883.72 feet, msl

0 — Brown fine SAND with some silt and clay

Gray silty CLAY, soft, moist to very moist

5 — 4 — Gray silty fine SAND with some coarse sand and fine gravel, medium dense, wet

grades with very fine to fine sand and trace of coarse sand at 9.0 feet

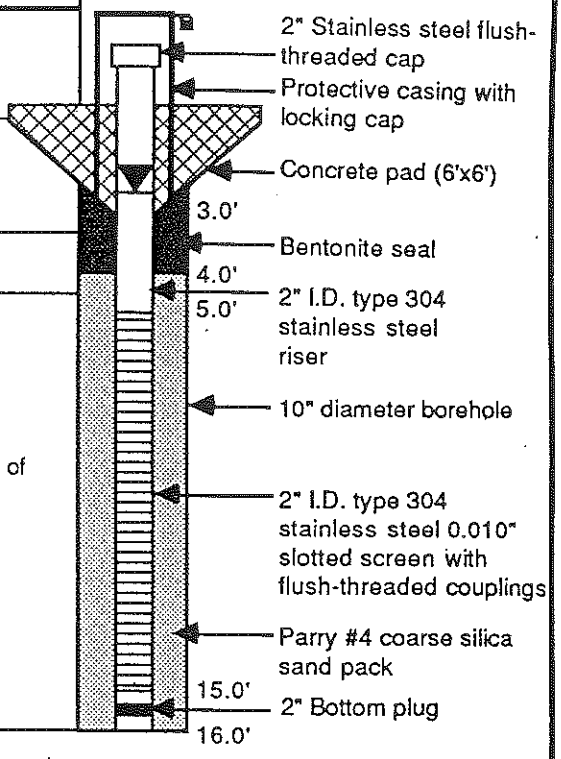
10 — 15

grades with some clay seams at 14.0 feet

15 — 16

20

Boring completed at 16.0 feet on 10/23/90.
Monitoring well installed at 15.0 feet on 10/23/90.



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 4.09 Feet Referenced to Top of Casing on 11/16/90

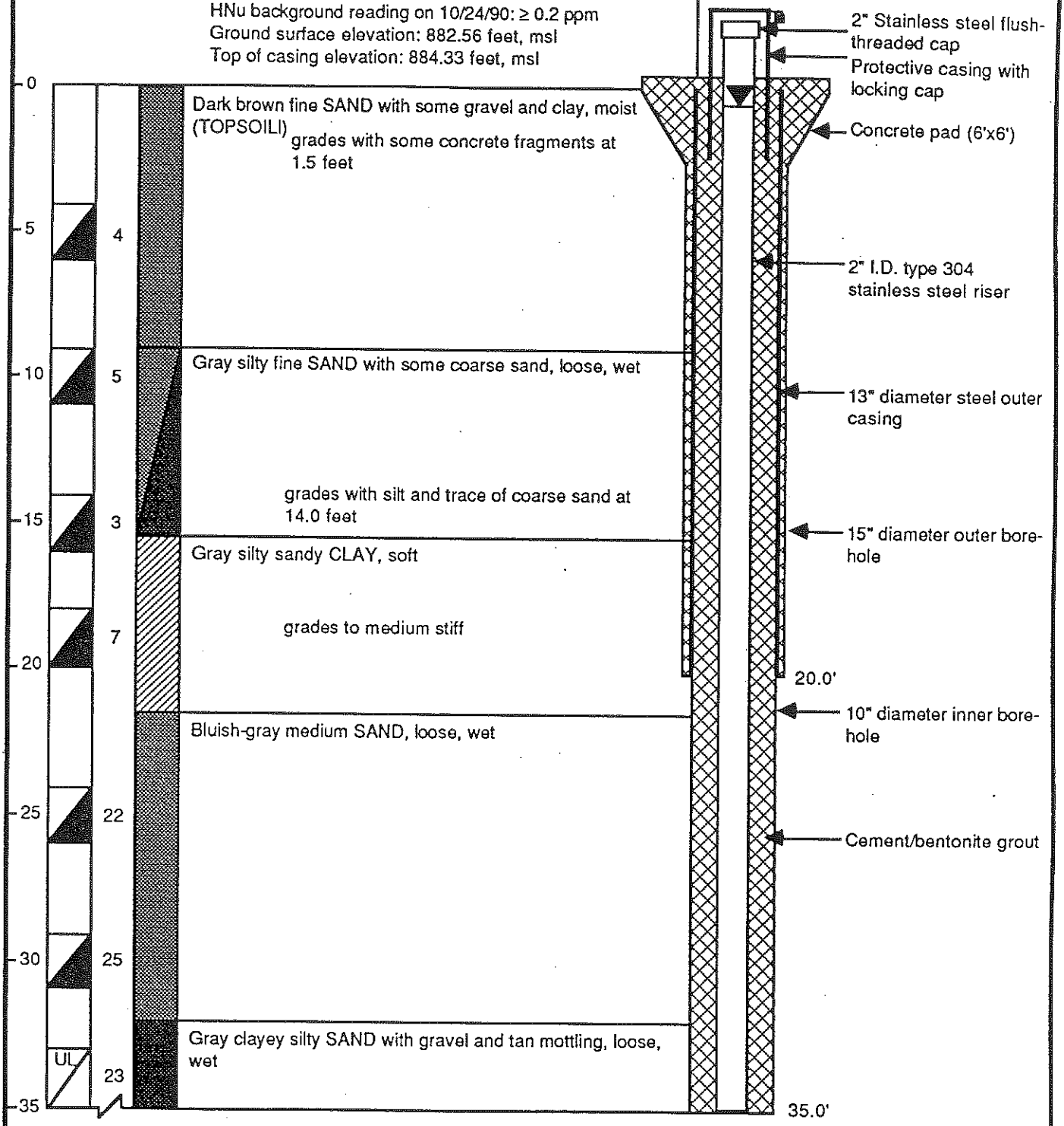
Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-F1

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 10/24/90: ≥ 0.2 ppm
Ground surface elevation: 882.56 feet, msl
Top of casing elevation: 884.33 feet, msl

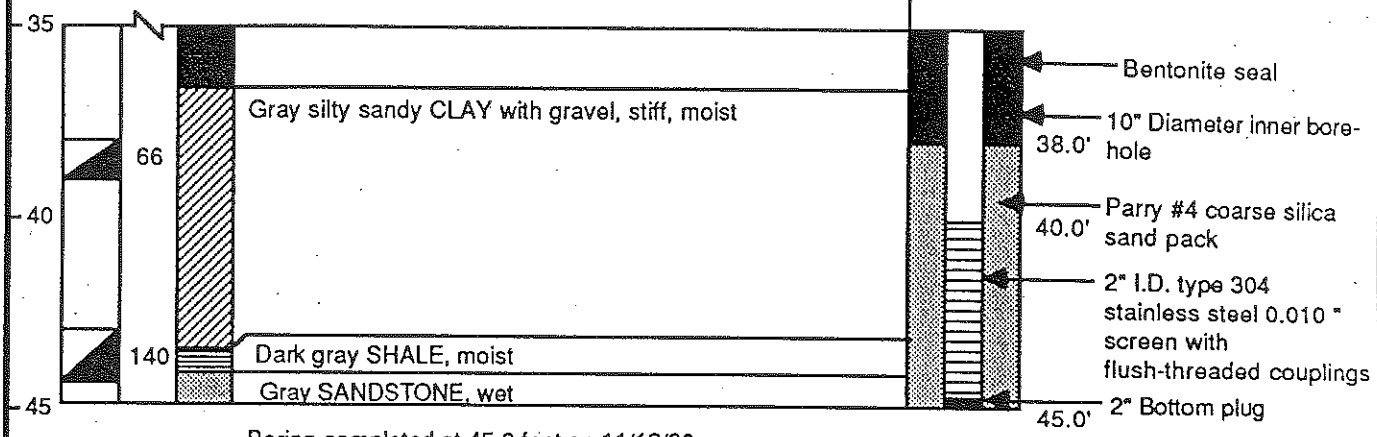


Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL MW-F2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL



Boring completed at 45.0 feet on 11/13/90.
Monitoring well installed at 45.0 feet on 11/13/90.

LEGEND:

Split Spoon Sample

UL Undisturbed Liner Sample

Ground Water Level Measured at 2.39 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-F2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/15/90: ≥ 0.2 ppm
Ground surface elevation: 882.56 feet, msl
Top of casing elevation: 884.50 feet, msl

0

See MW-F2 for soil descriptions

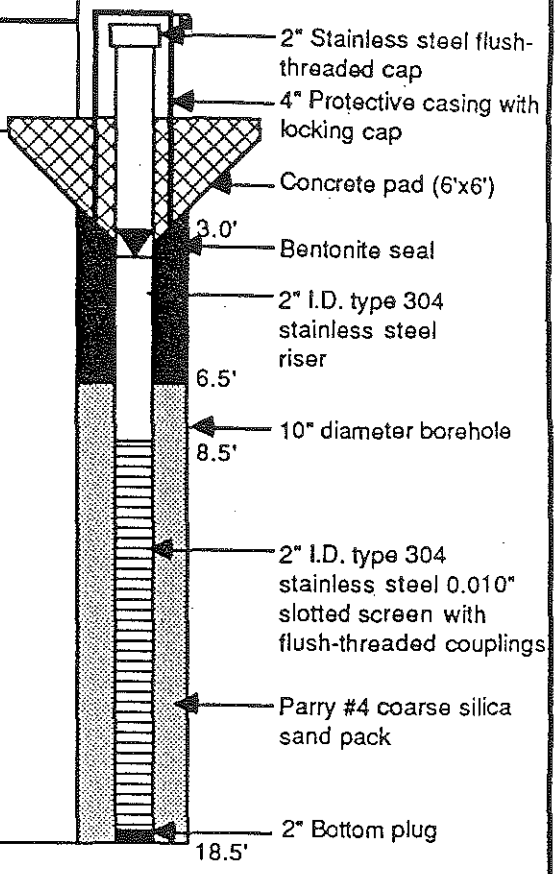
5

10

15

20

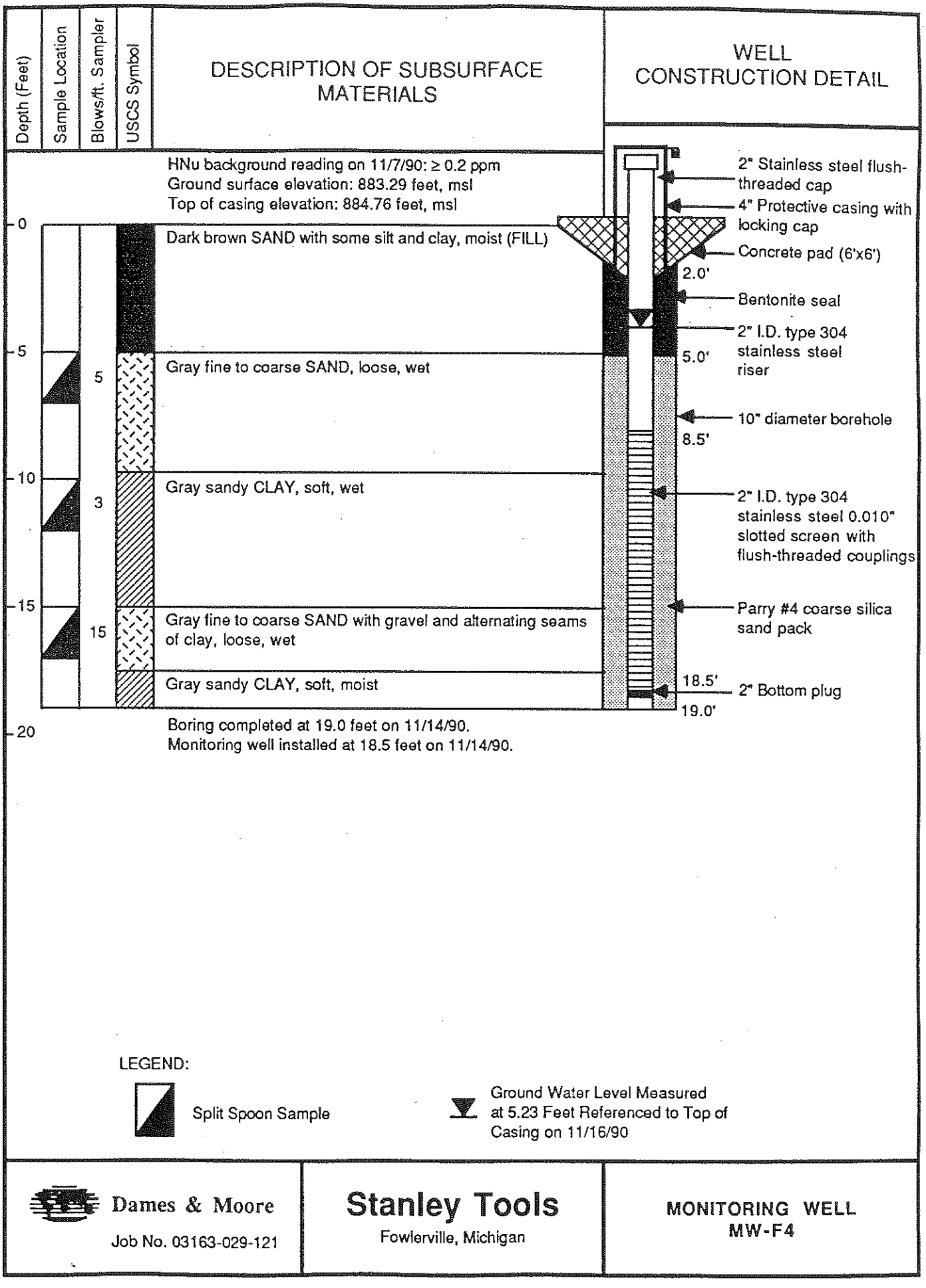
Boring completed at 18.5 feet on 11/15/90.
Monitoring well installed at 18.5 feet on 11/15/90.



LEGEND:

▼ Ground Water Level Measured at 5.17 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-F3



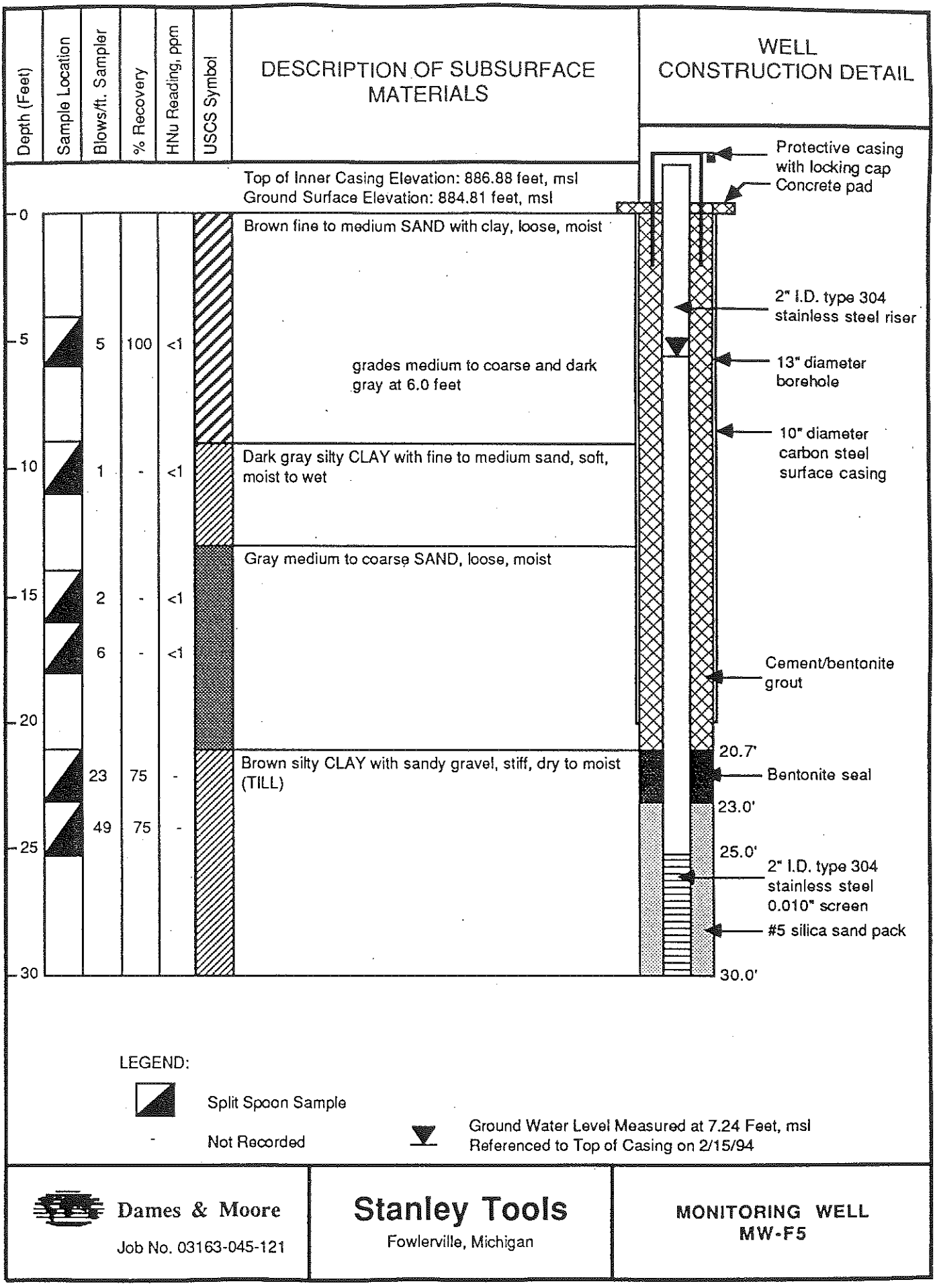
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-F4



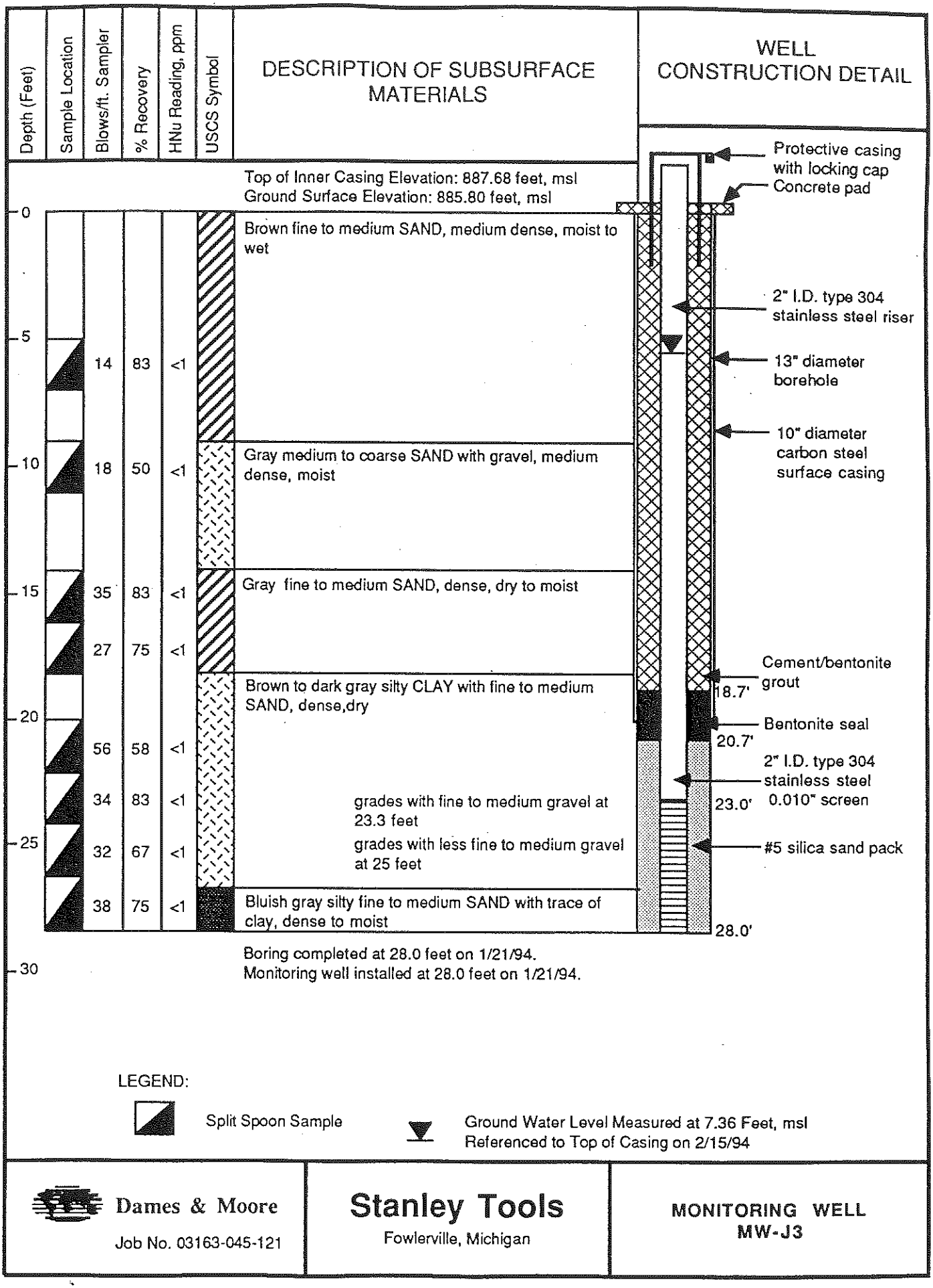
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-F5



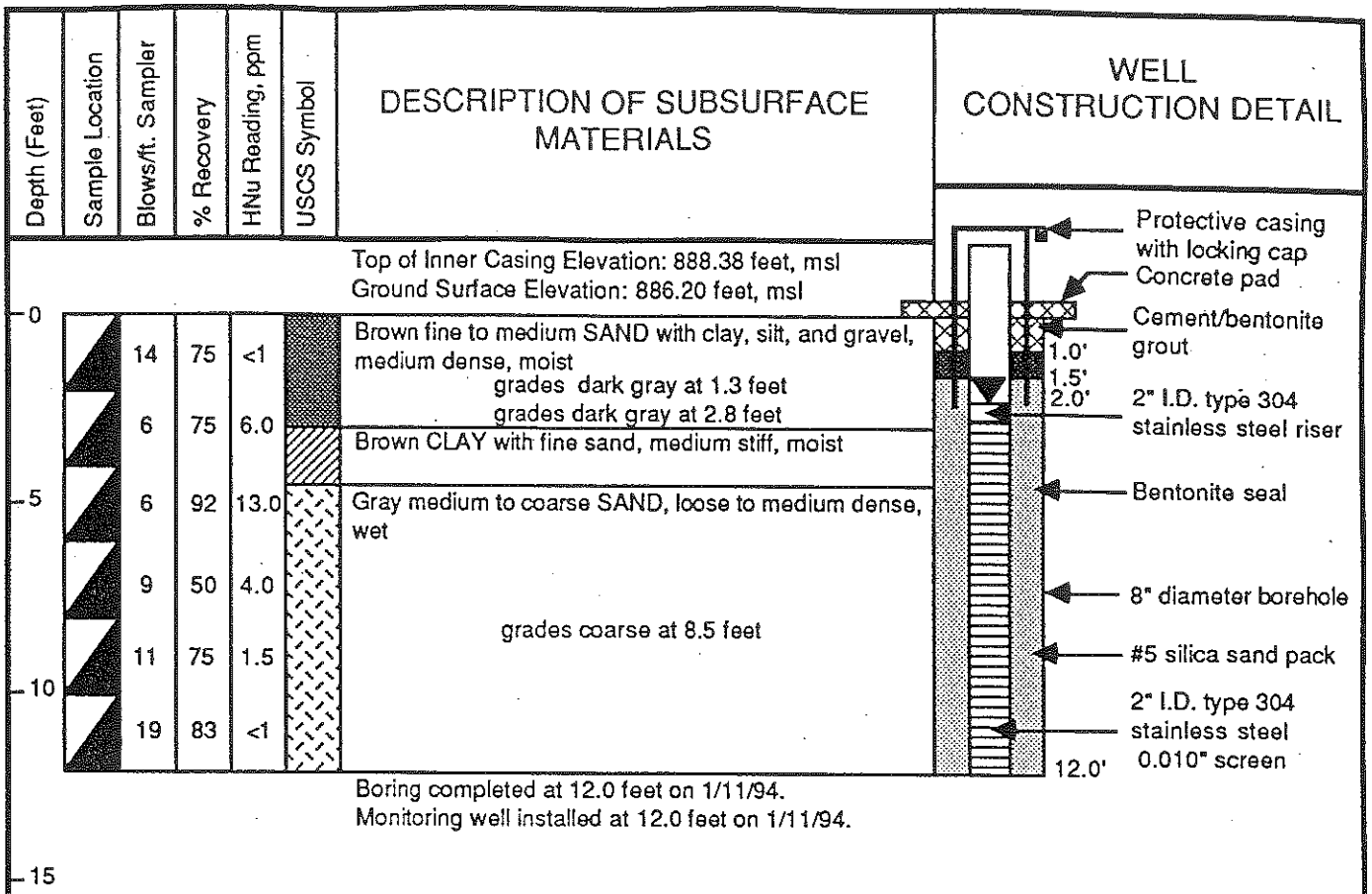
Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-J3



LEGEND:

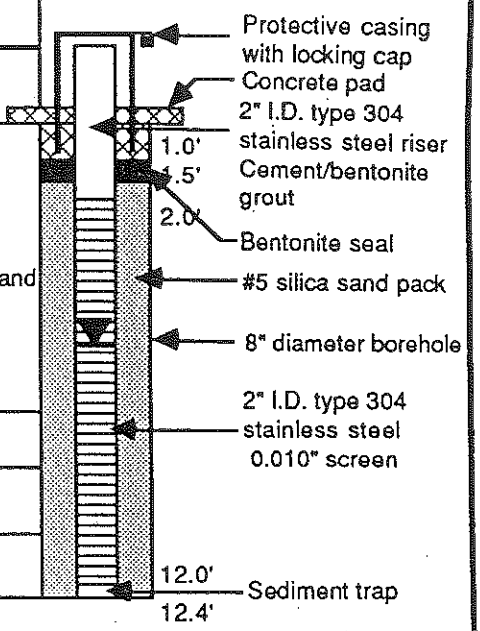
Split Spoon Sample

Ground Water Level Measured at 6.69 Feet, msl
Referenced to Top of Casing on 2/15/94

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-J4

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Top of Inner Casing Elevation: 890.02 feet, msl Ground Surface Elevation: 887.78 feet, msl
0						Brown silty CLAY with fine to medium sand, medium stiff, moist
						grades dark gray with strong odor from 2.0 to 3.0 feet
5		6	88	1.2		grades with more fine to medium sand and slight odor at 4.0 feet
						Brown silty very fine to fine SAND with trace clay, soft, wet
10		11	67	<1		Gray silty fine to coarse SAND with fine to medium gravel, medium dense, wet
						Brown very fine sandy CLAY with trace gravel, stiff, moist
						Boring completed at 12.4 feet on 1/11/94. Monitoring well installed at 12.0 feet on 1/11/94.
15						

WELL CONSTRUCTION DETAIL



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 8.05 Feet, msl
Referenced to Top of Casing on 2/15/94

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-K1

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL
						Top of Inner Casing Elevation: 891.54 feet, msl Ground Surface Elevation: 888.78 feet, msl	
0						Mottled greenish-gray and brown silty CLAY with fine to medium sand, medium stiff, moist	Protective casing with locking cap Concrete pad 2" I.D. type 304 stainless steel riser
						2.5'	Bentonite seal
						Gray silty fine to medium SAND with trace clay, medium dense, moist to wet	3.0'
5		12	58	-		grades with more clay at 5.5 feet	#5 silica sand pack
						Gray very fine sandy CLAY with silt, stiff, moist	
							8" diameter borehole
10		5	75	-		Layer of silty fine to medium SAND with trace clay, stiff, moist	2" I.D. type 304 stainless steel 0.010" screen
						Gray very fine sandy CLAY with silt, medium stiff, moist to wet	13.0'
							13.4'
15						Boring completed at 13.4 feet on 1/10/94. Monitoring well installed at 13.0 feet on 1/10/94.	

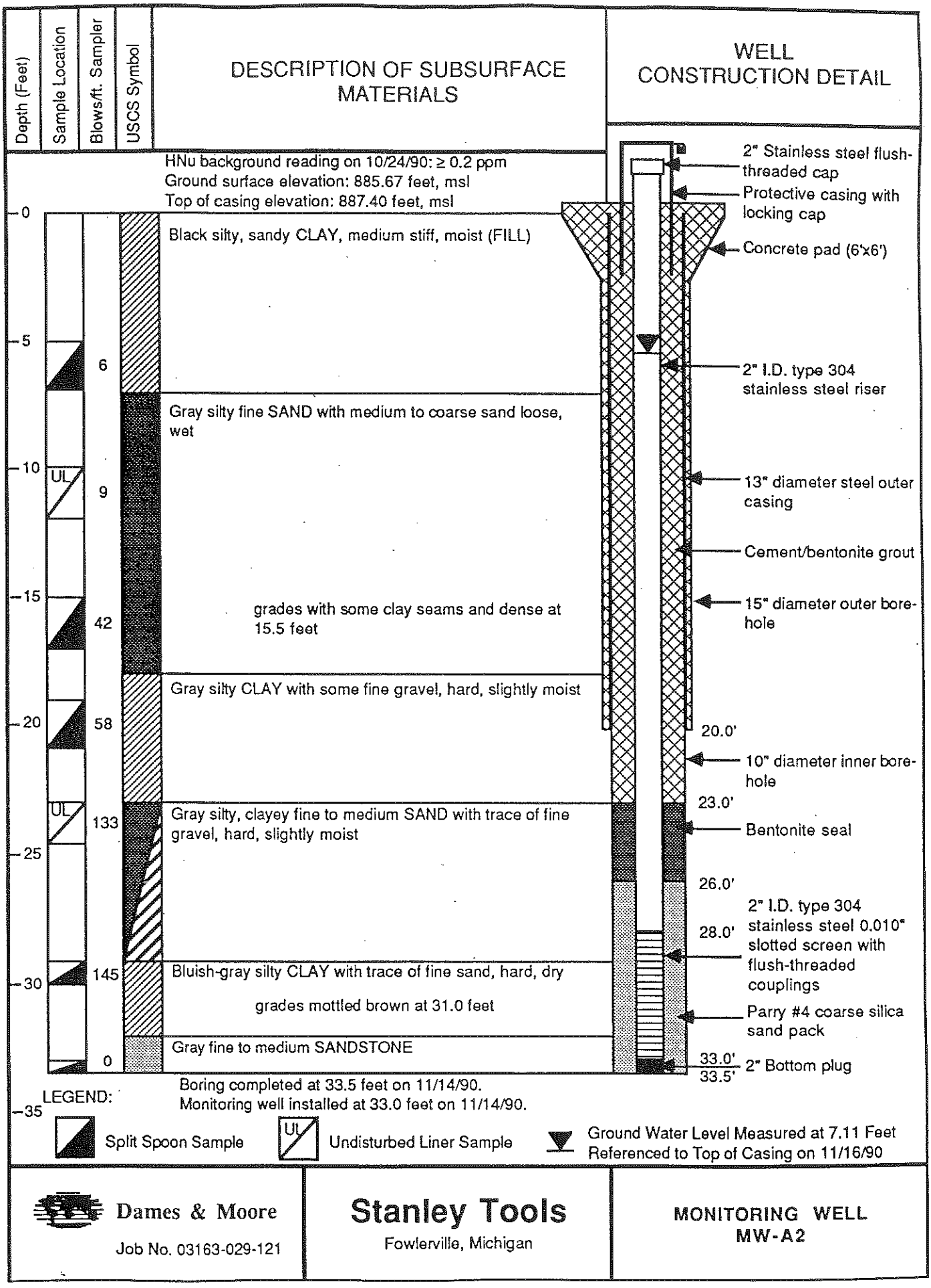
LEGEND:

Split Spoon Sample

\- Not Recorded

Ground Water Level Measured at 8.32 Feet, msl
Referenced to Top of Casing on 2/15/94

Dames & Moore Job No. 03163-045-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL **MW-L1**



Dames & Moore

Job No. 03163-029-121

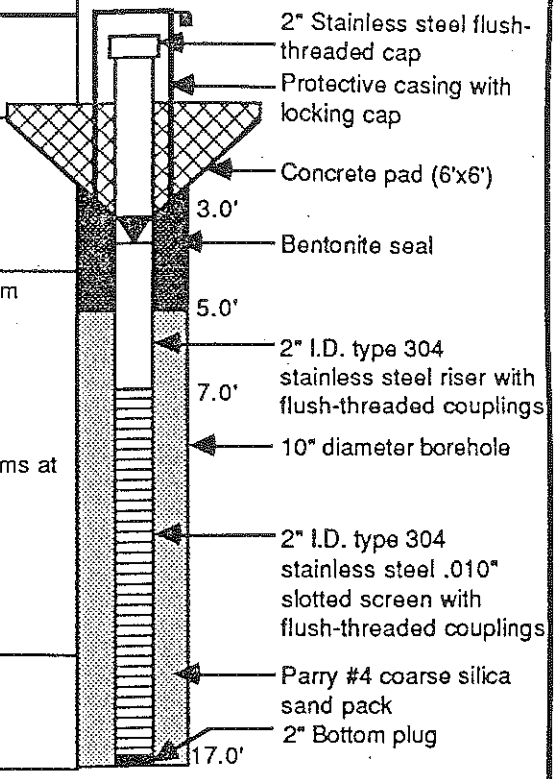
Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-A2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
				HNu background reading on 10/26/90: ≥ 0.2 ppm Ground surface elevation: 884.66 feet, msl Top of casing elevation: 888.49 feet, msl
0				Brown fine SAND, moist (FILL)
				grades black at 3.0 feet
5		27		Gray silty fine to medium SAND with some fine to medium gravel, medium dense, wet
10		27		grades with more silt and some clayey seams at 9.0 feet
15		94		Gray silty, sandy CLAY with some gravel, hard, moist
				Boring completed at 17.0 feet on 10/26/90. Monitoring well installed at 17.0 feet on 10/26/90.
20				

WELL CONSTRUCTION DETAIL



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 7.01 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore

Job No. 03163-029-121

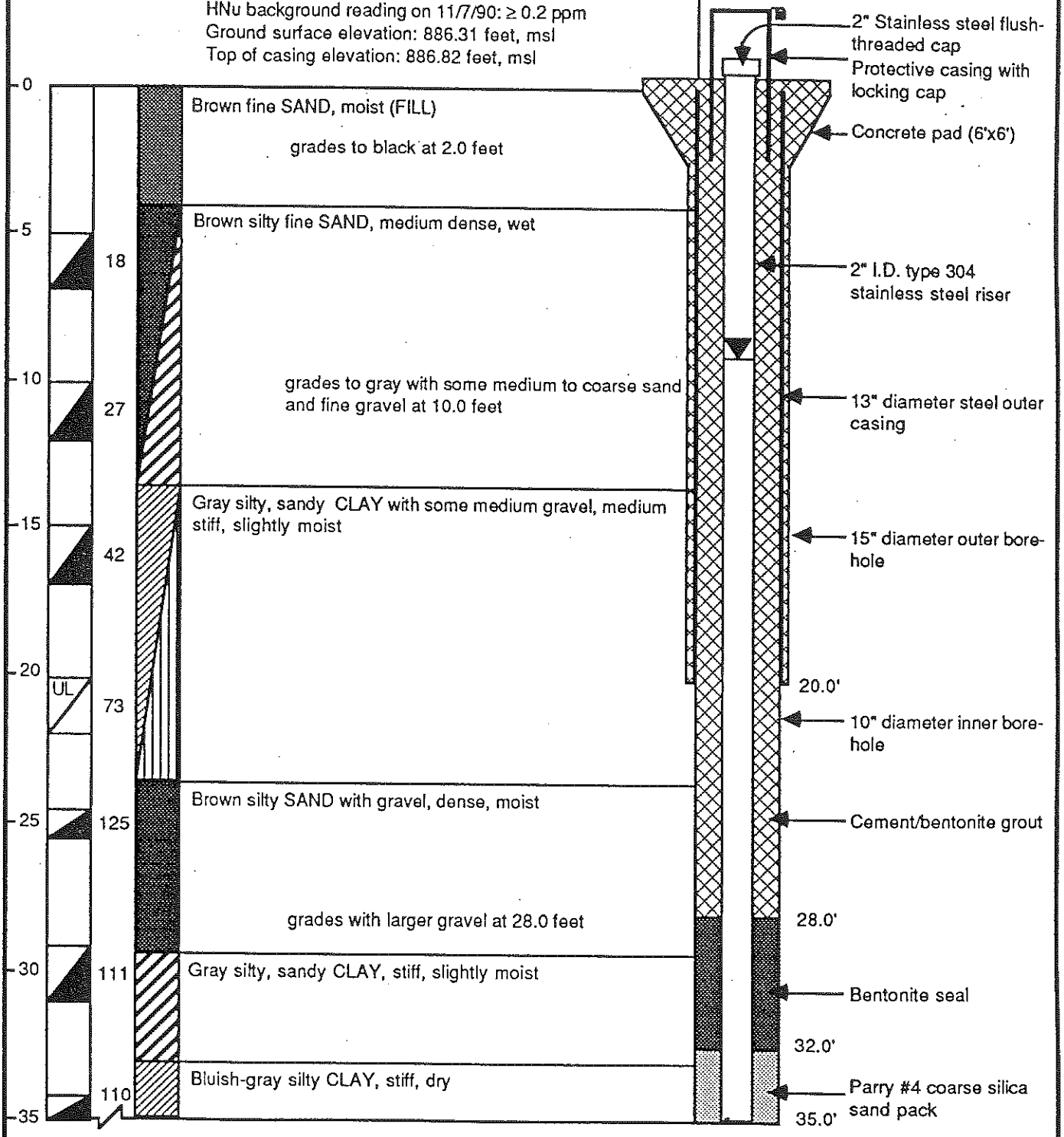
Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-A4

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/7/90: ≥ 0.2 ppm
Ground surface elevation: 886.31 feet, msl
Top of casing elevation: 886.82 feet, msl

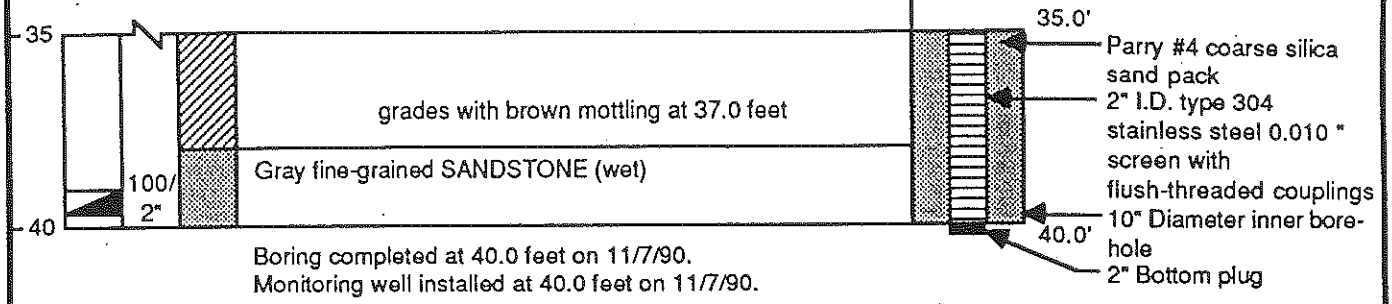


Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-B2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL



Boring completed at 40.0 feet on 11/7/90.
Monitoring well installed at 40.0 feet on 11/7/90.

45

LEGEND:

Split Spoon Sample

UL Undisturbed Liner Sample

Ground Water Level Measured at 9.10 Feet Referenced to Top of Casing on 11/16/90

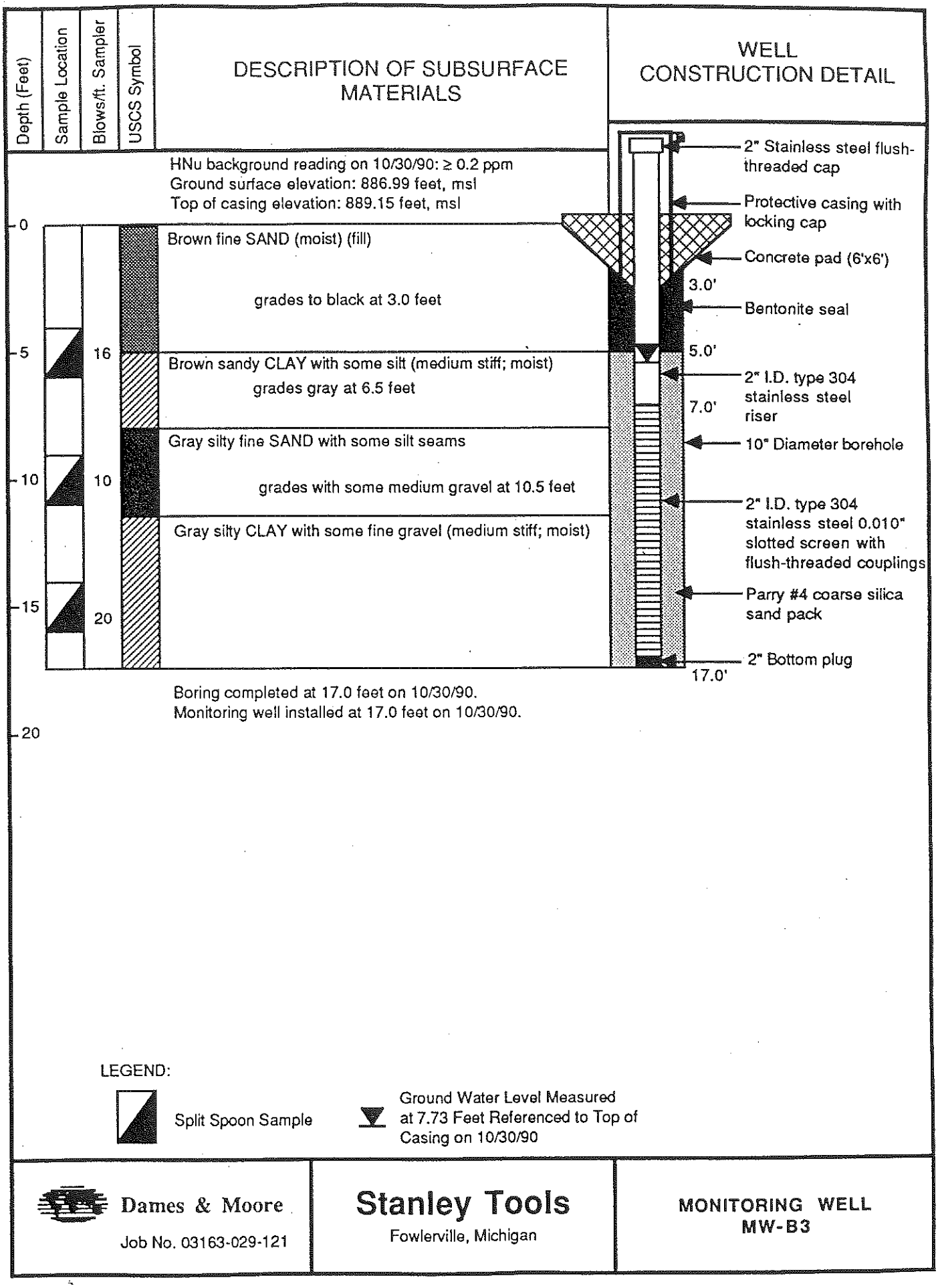
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-B2



Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-B3

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/6/90: ≥ 0.2 ppm
Ground surface elevation: 885.69 feet, msl
Top of casing elevation: 888.65 feet, msl

0

See MW-E2 for soil descriptions

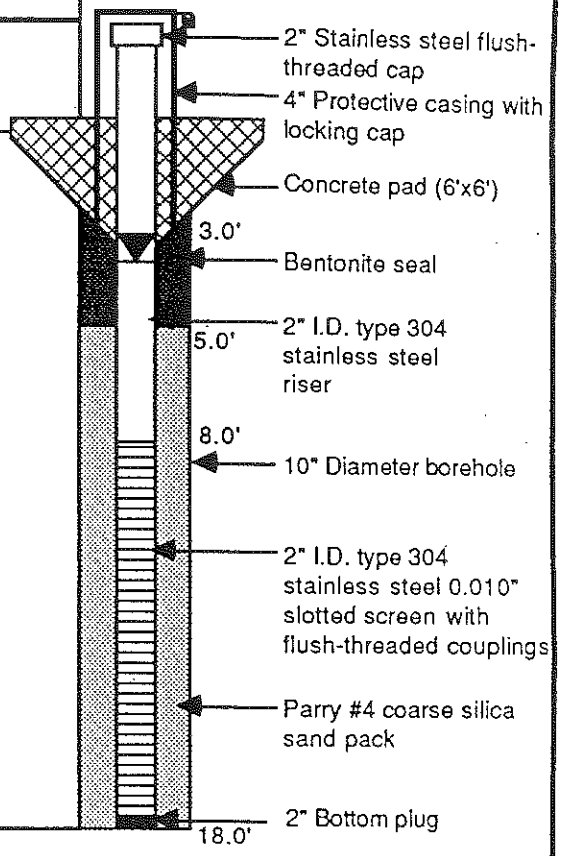
5

10

15

20

Boring completed at 18.0 feet on 11/6/90.
Monitoring well installed at 18.0 feet on 11/6/90.



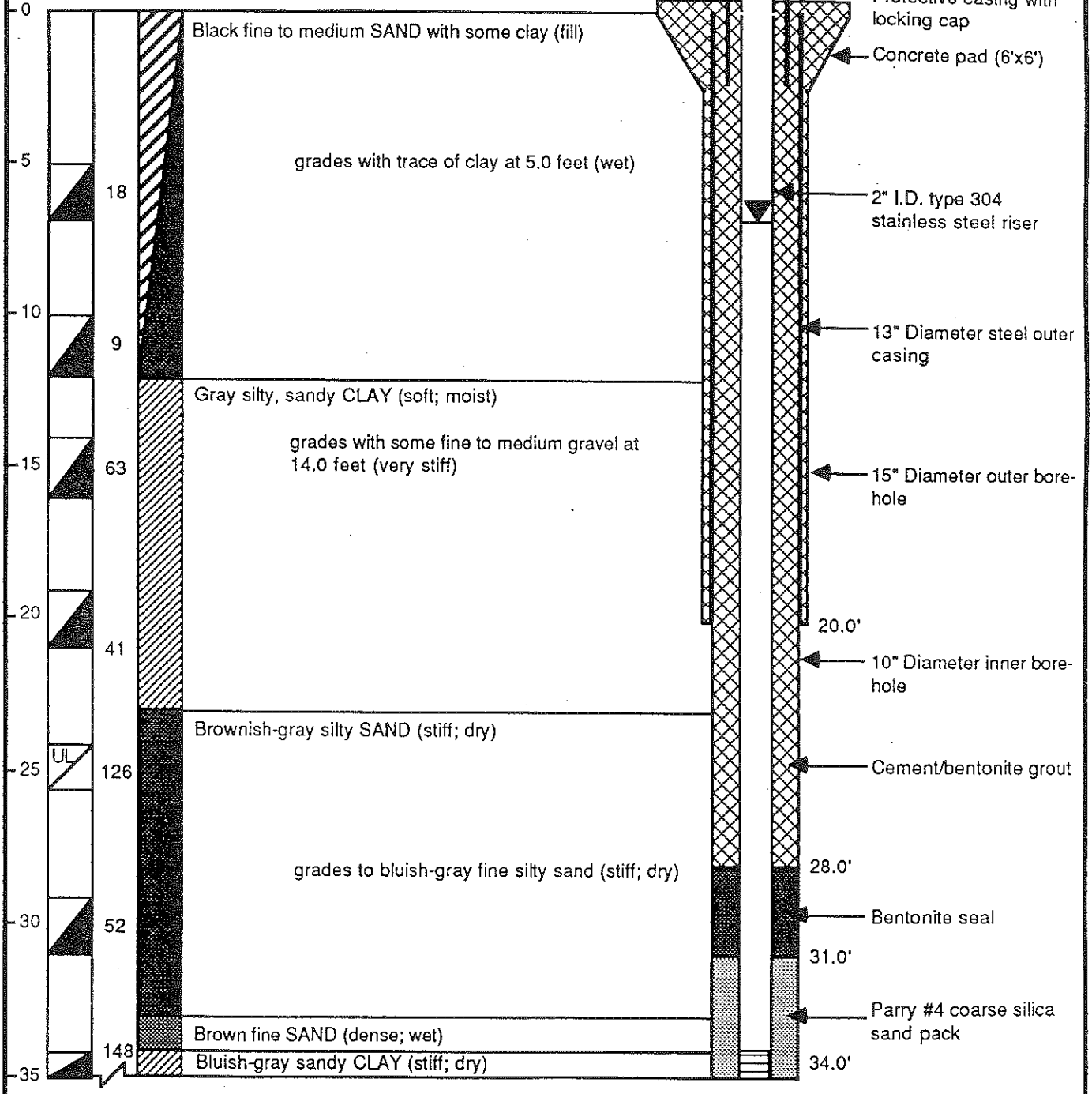
LEGEND:

▼ Ground Water Level Measured at 6.56 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-E1

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 10/26/90: ≥ 0.2 ppm
Ground surface elevation: 886.31 feet, msl
Top of casing elevation: 886.82 feet, msl

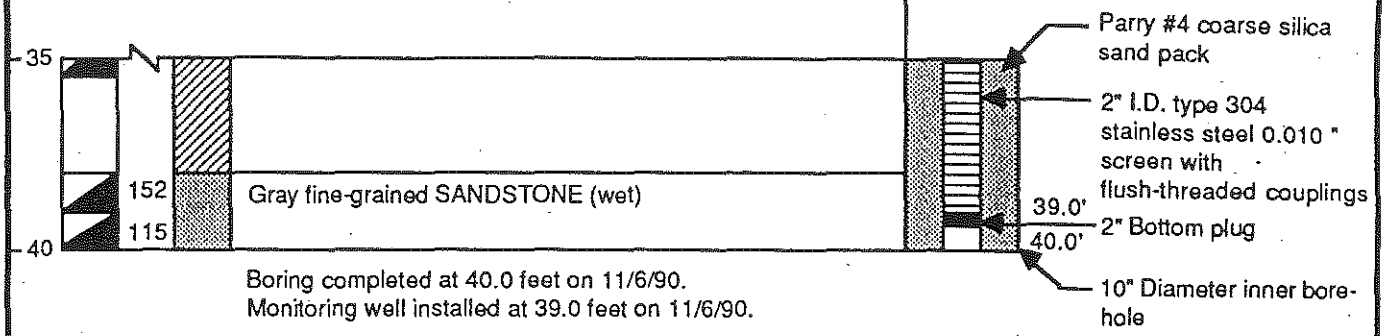


Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-E2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL
35					
		152		Gray fine-grained SANDSTONE (wet)	
40		115			



Boring completed at 40.0 feet on 11/6/90.
Monitoring well installed at 39.0 feet on 11/6/90.

LEGEND:

Split Spoon Sample

UL Undisturbed Liner Sample

Ground Water Level Measured at 7.68 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-E2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 10/23/90: ≥ 0.2 ppm
Ground surface elevation: 881.74 feet, msl
Top of casing elevation: 883.72 feet, msl

0

Brown fine SAND with some silt and clay

Gray silty CLAY (soft; moist to very moist)

5 — 4

Gray silty fine SAND with some coarse sand and fine gravel (medium dense; wet)

10 — 15

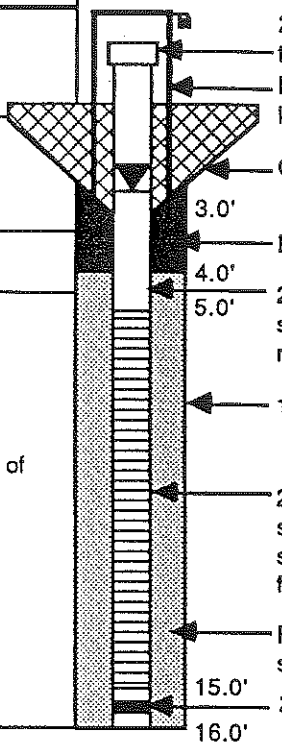
grades with very fine to fine sand and trace of coarse sand at 9.0 feet

15 — 16

grades with some clay seams at 14.0 feet

20

Boring completed at 16.0 feet on 10/23/90.
Monitoring well installed at 15.0 feet on 10/23/90.



2" Stainless steel flush-threaded cap
Protective casing with locking cap
Concrete pad (6'x6')
3.0'
Bentonite seal
4.0'
2" I.D. type 304 stainless steel riser
5.0'
10" Diameter borehole
2" I.D. type 304 stainless steel 0.010" slotted screen with flush-threaded couplings
Parry #4 coarse silica sand pack
15.0'
2" Bottom plug
16.0'

LEGEND:

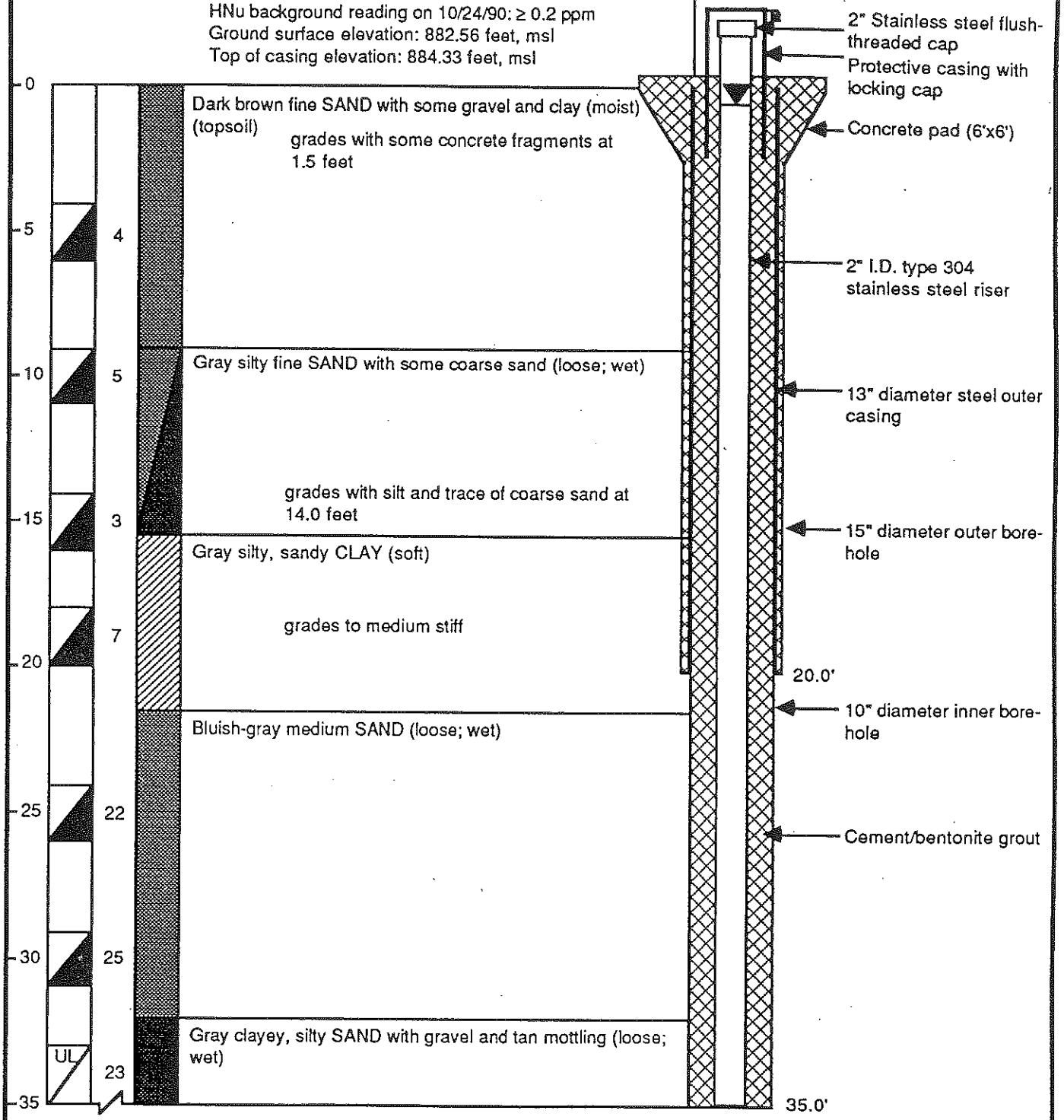
Split Spoon Sample

Ground Water Level Measured at 4.09 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	**MONITORING WELL MW-F1**

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 10/24/90: ≥ 0.2 ppm
Ground surface elevation: 882.56 feet, msl
Top of casing elevation: 884.33 feet, msl

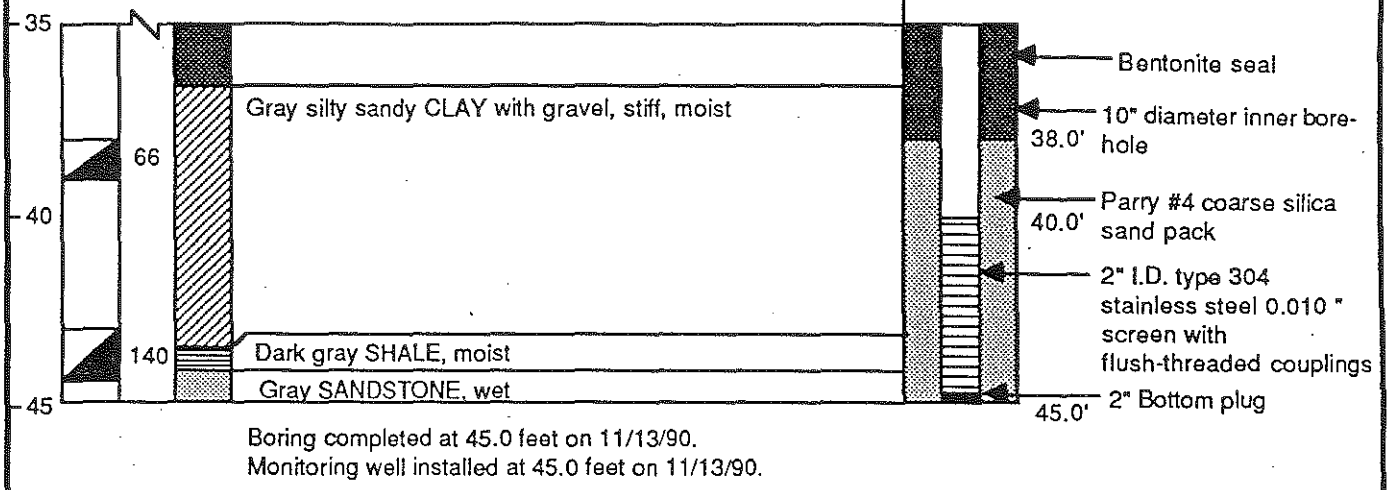


Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-F2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL



Boring completed at 45.0 feet on 11/13/90.
Monitoring well installed at 45.0 feet on 11/13/90.

LEGEND:

Split Spoon Sample

UL Undisturbed Liner Sample

Ground Water Level Measured at 2.39 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL **MW-F2** Page 2 of 2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/15/90: ≥ 0.2 ppm
Ground surface elevation: 882.56 feet, msl
Top of casing elevation: 884.50 feet, msl

0

See MW-F2 for soil descriptions

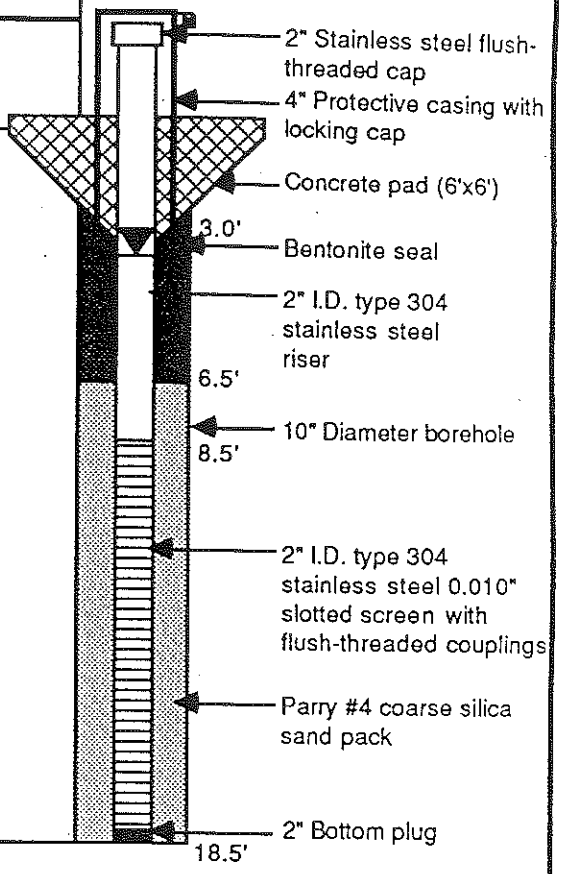
5

10

15

20

Boring completed at 18.5 feet on 11/15/90.
Monitoring well installed at 18.5 feet on 11/15/90.



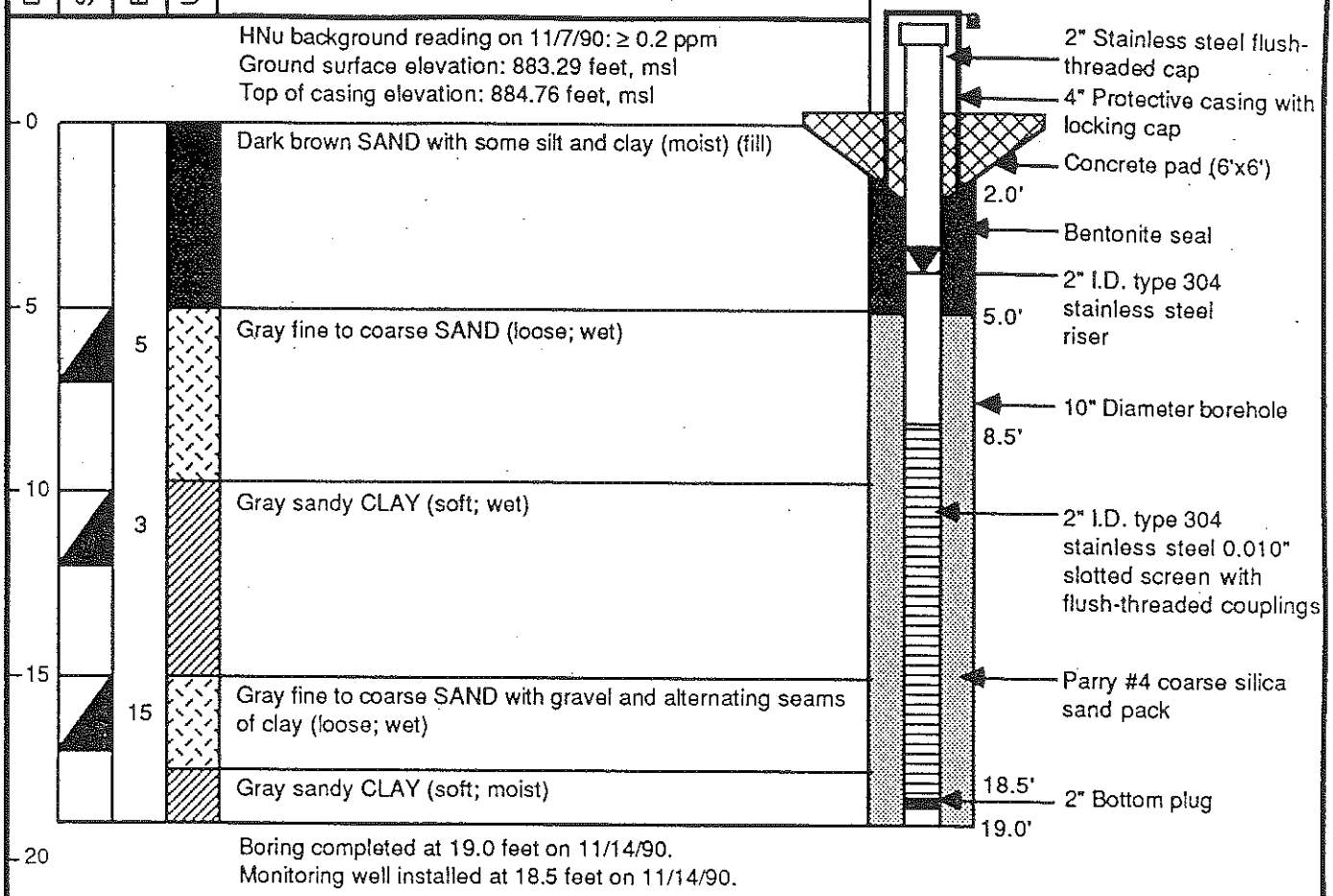
LEGEND:

▼ Ground Water Level Measured at 5.17 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL MW-F3

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/7/90: ≥ 0.2 ppm
Ground surface elevation: 883.29 feet, msl
Top of casing elevation: 884.76 feet, msl



Boring completed at 19.0 feet on 11/14/90.
Monitoring well installed at 18.5 feet on 11/14/90.

LEGEND:

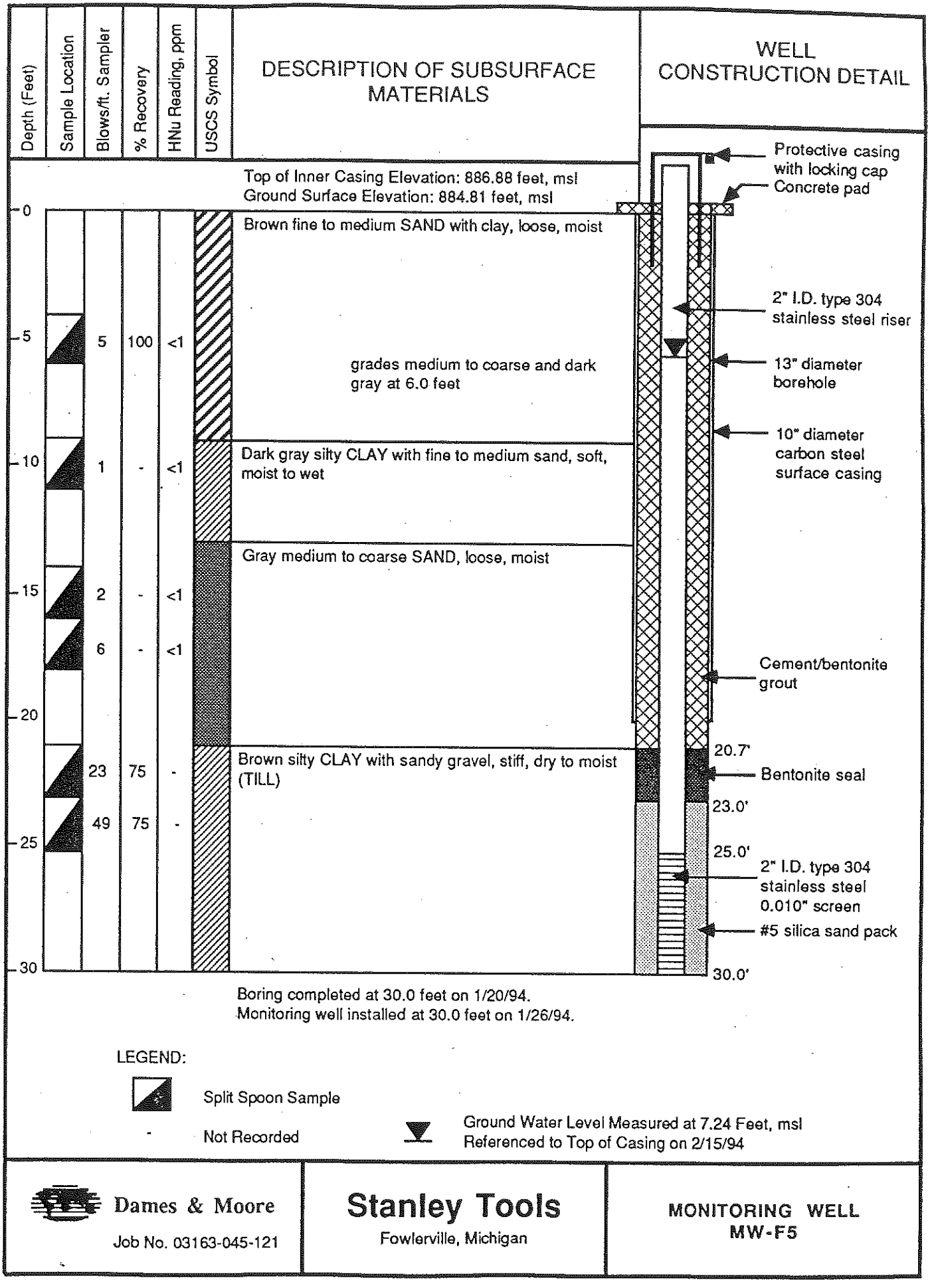
Split Spoon Sample

Ground Water Level Measured at 5.23 Feet Referenced to Top of Casing on 11/16/90.

Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL MW-F4



Dames & Moore

Job No. 03163-045-121

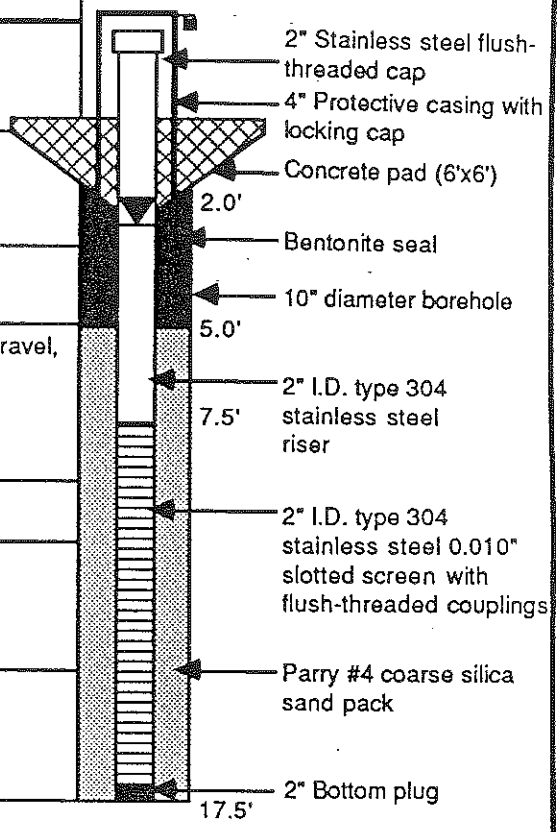
Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-F5

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
				HNu background reading on 11/1/90: ≥ 0.2 ppm Ground surface elevation: 882.98 feet, msl Top of casing elevation: 885.41 feet, msl
0				Brown clayey fine SAND, moist (FILL)
				Black sandy CLAY with roots and twigs, moist
5		12		Gray silty fine SAND with some coarse sand and fine gravel, medium dense, wet
10		15		Brown silty sandy CLAY with some fine gravel, medium dense, moist
				Gray silty fine to coarse SAND, medium dense, wet
15		37		Gray silty sandy CLAY, medium stiff, very moist to wet
				Boring completed at 17.5 feet on 11/1/90. Monitoring well installed at 17.5 feet on 11/1/90.
20				

WELL CONSTRUCTION DETAIL



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 4.80 Feet Referenced to Top of Casing on 11/16/90

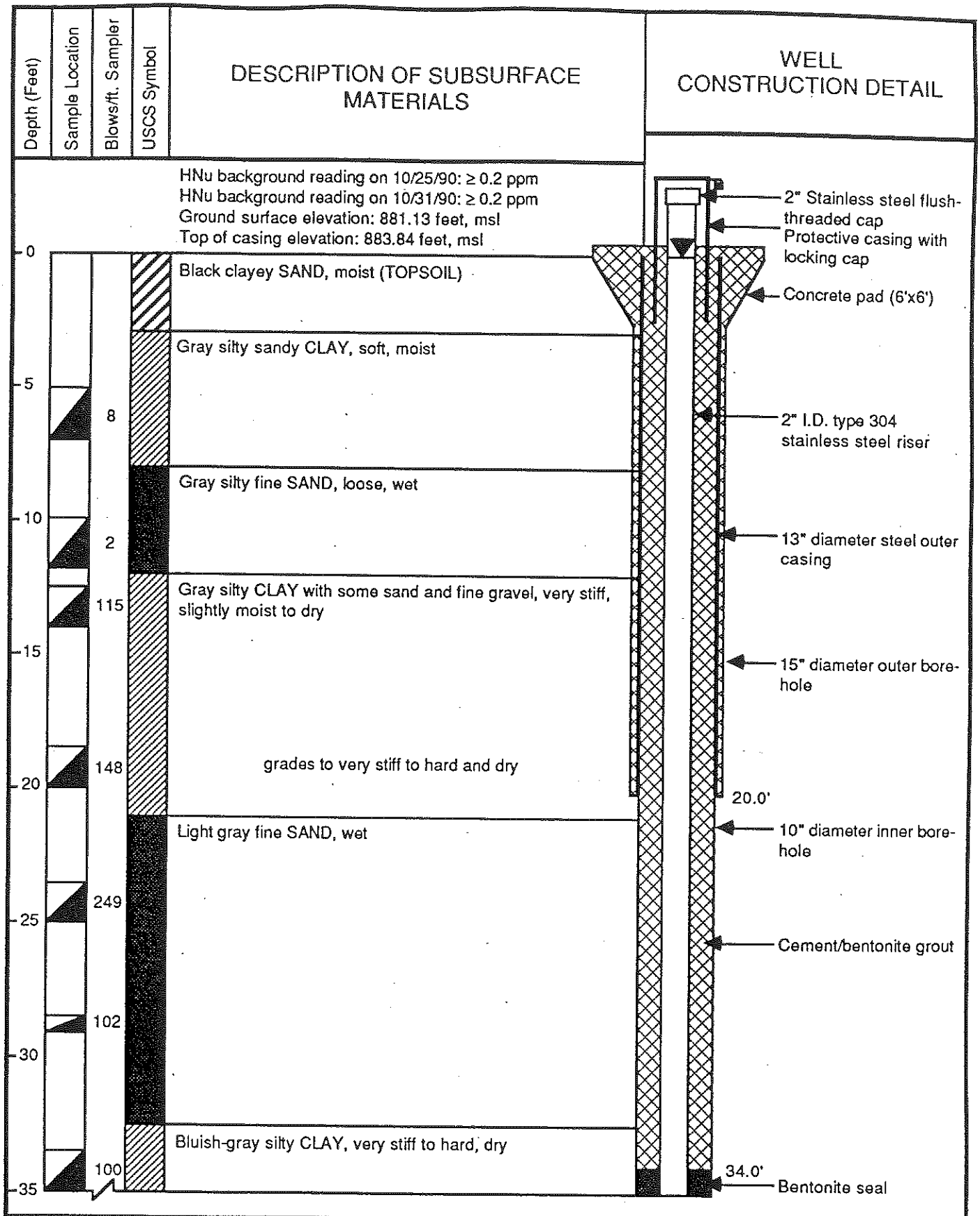
Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-G1



Dames & Moore

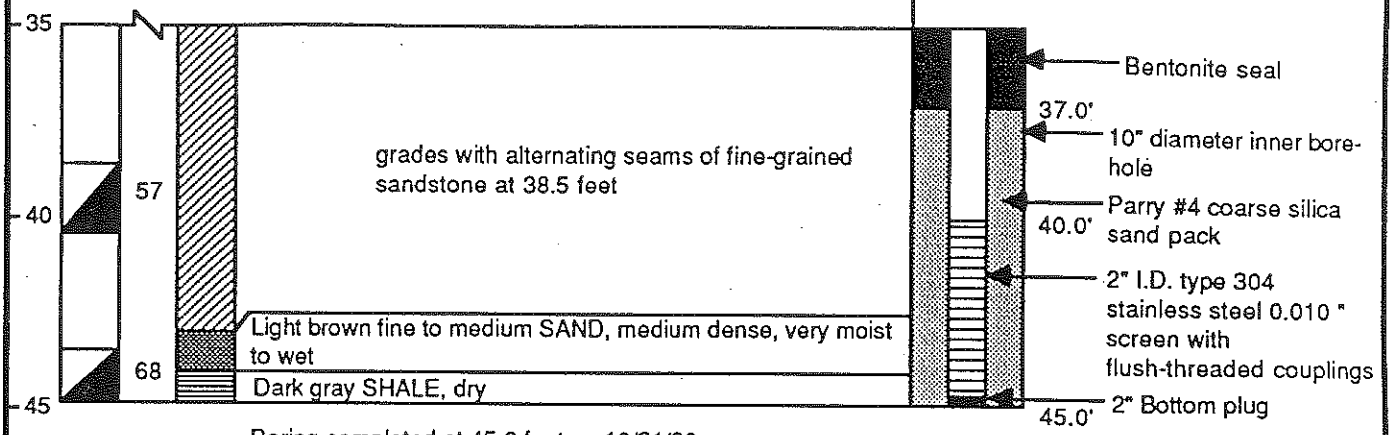
Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL MW-G2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL



Boring completed at 45.0 feet on 10/31/90.
Monitoring well installed at 45.0 feet on 10/31/90.

LEGEND:

Split Spoon Sample

Ground Water Level Measured at 2.7 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL **MW-G2**

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/1/90: ≥ 0.2 ppm
Ground surface elevation: 881.13 feet, msl
Top of casing elevation: 884.12 feet, msl

0

See MW-G2 for soil descriptions

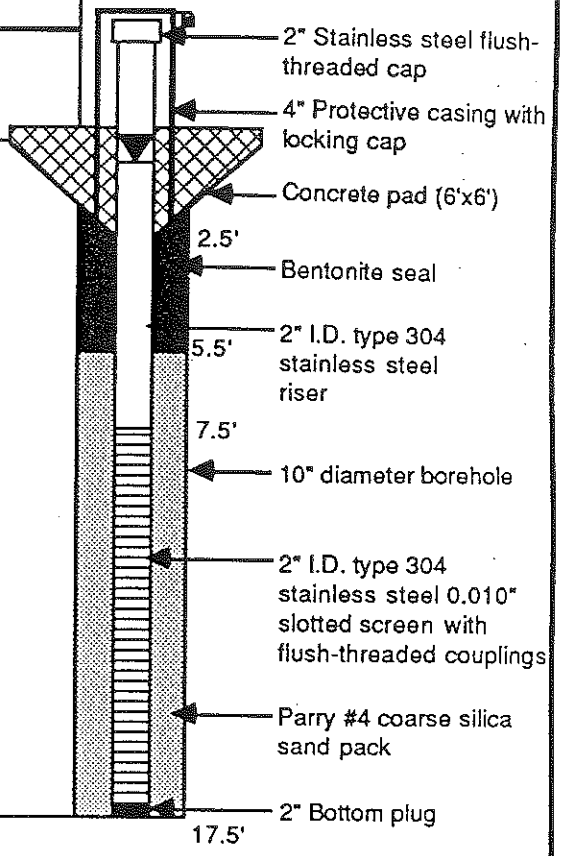
5

10

15

Boring completed at 17.5 feet on 11/1/90.
Monitoring well installed at 17.5 feet on 11/1/90.

20



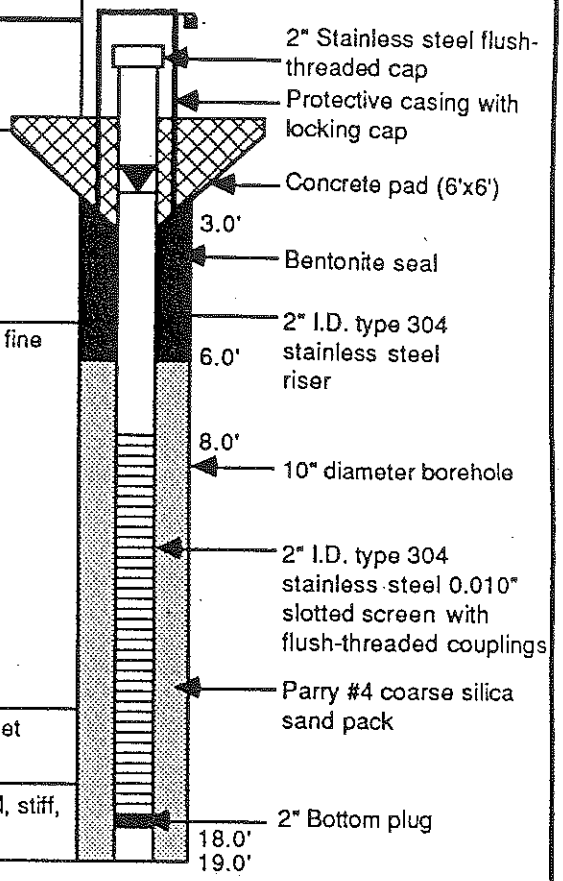
LEGEND:

▼ Ground Water Level Measured at 3.38 Feet Referenced to Top of Casing on 11/1/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL **MW-G3**

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
				HNu background reading on 11/1/90: ≥ 0.2 ppm Ground surface elevation: 884.24 feet, msl Top of casing elevation: 886.82 feet, msl
0				Brown clayey fine SAND, moist (FILL)
5		9		Mottled brown and gray silty CLAY with some thin, wet, fine seams of sand, medium stiff, moist
				grades to gray, very moist
10		7		
15		4		Gray medium to coarse SAND with fine gravel, loose, wet
		40		Gray silty CLAY with some coarse sand and fine gravel, stiff, moist
20				Boring completed at 19.0 feet on 11/1/90. Monitoring well installed at 18.0 feet on 11/1/90.

WELL CONSTRUCTION DETAIL



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 4.05 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore

Job No. 03163-029-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-G4

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 11/15/90: ≥ 0.2 ppm
Ground surface elevation: 886.24 feet, msl
Top of casing elevation: 888.24 feet, msl

0

See MW-J2 for soil descriptions

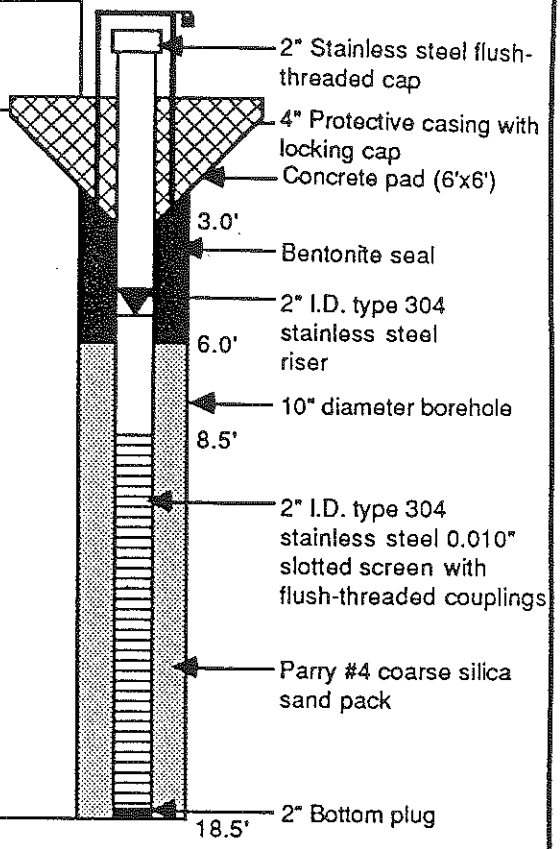
5

10

15

20

Boring completed at 18.5 feet on 11/15/90.
Monitoring well installed at 18.5 feet on 11/15/90.



LEGEND:

▼ Ground Water Level Measured at 7.4 Feet Referenced to Top of Casing on 11/16/90

Dames & Moore Job No. 03163-029-121	**Stanley Tools** Fowlerville, Michigan	MONITORING WELL **MW-J1**

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL

HNu background reading on 10/30/90: ≥ 0.2 ppm
HNu background reading on 11/12/90: ≥ 0.2 ppm
Ground surface elevation: 886.24 feet, msl
Top of casing elevation: 888.99 feet, msl

0

Brown fine SAND with some clay, moist (FILL)

grades with some medium to coarse gravel at 2.0 feet

5

27

Brown fine SAND with some silt,medium dense, wet

10

7

grades to gray with some medium to coarse sand

15

40

Gray silty CLAY with some fine sand, medium stiff, very moist

grades to sandy clay at 15.5 feet, soft

20

31

grades to medium stiff, moist

25

57

grades with gravel at 24.0 feet

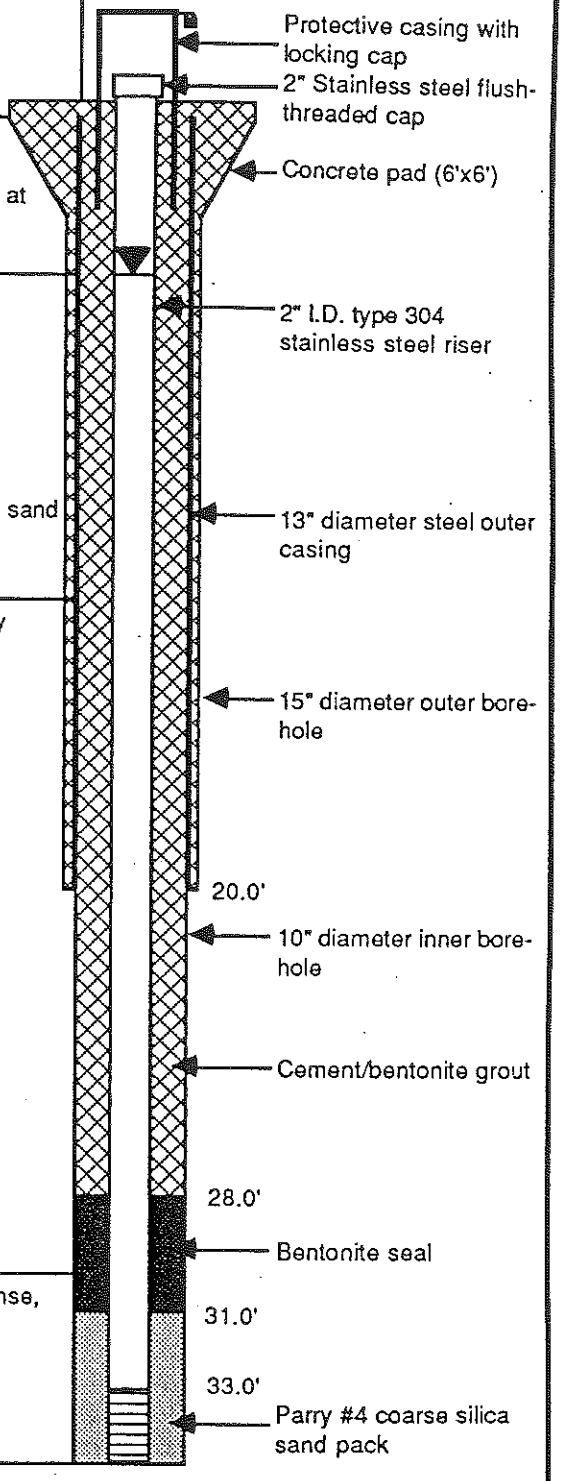
30

49

Bluish-gray silty SAND with sandy clay lenses, very dense, slightly moist

80/6"

35



Dames & Moore
Job No. 03163-029-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-J2

Depth (Feet)	Sample Location	Blows/ft. Sampler	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL
35				grades with tan mottling at 36.5 feet	Parry #4 coarse silica sand pack
					2" I.D. type 304 stainless steel 0.010 " screen with flush-threaded couplings
					38.0' 2" Bottom plug
	NA			Gray fine-grained SANDSTONE, wet	
40					39.5' 10" diameter inner bore-hole

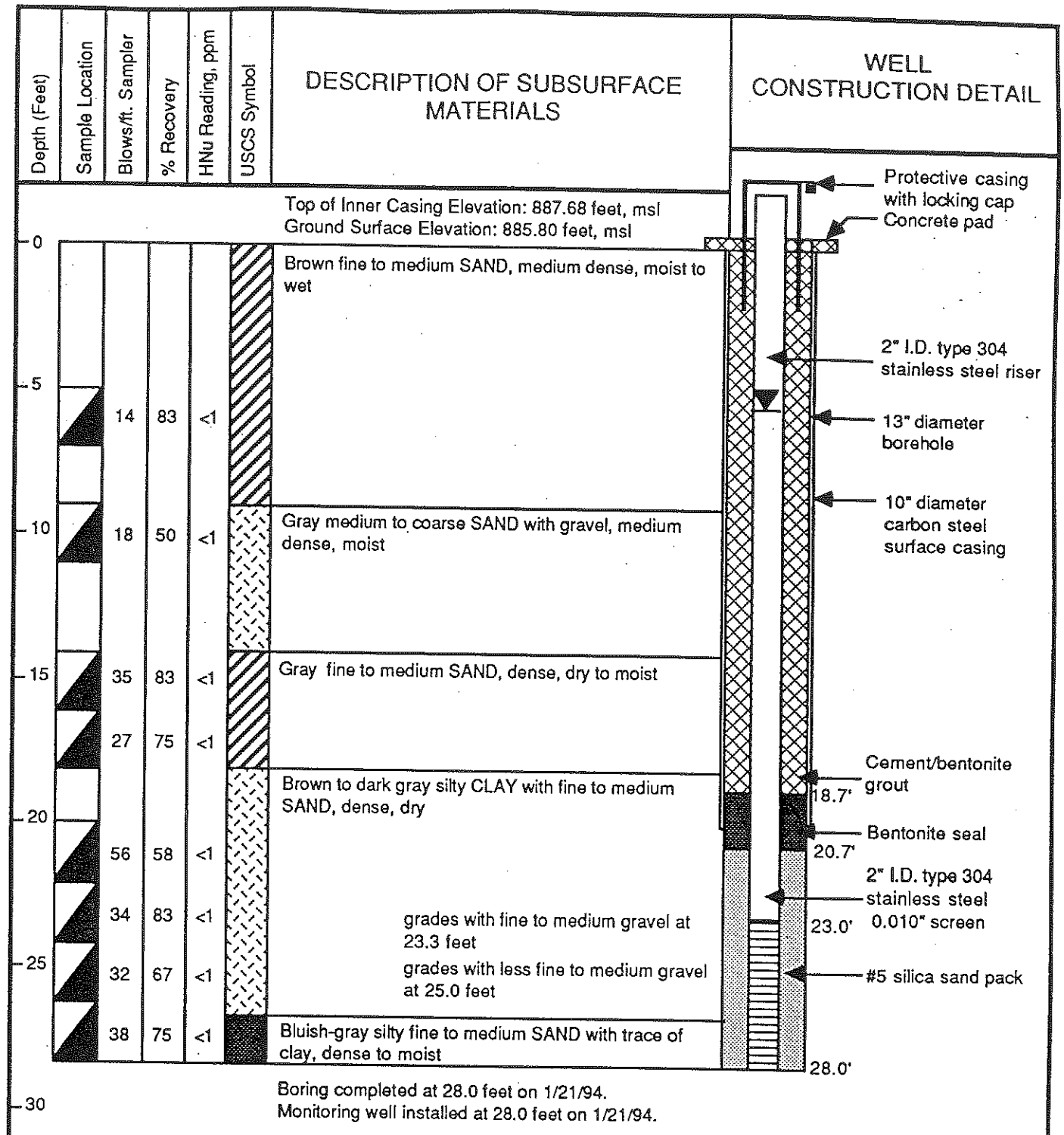
Boring completed at 39.5 feet on 11/12/90.
Monitoring well installed at 38.0 feet on 11/12/90.

LEGEND:

Split Spoon Sample

Ground Water Level Measured at 6.76 Feet Referenced to Top of Casing on 11/16/90

NA Not Applicable



LEGEND:

Split Spoon Sample

Ground Water Level Measured at 7.36 Feet, msl
Referenced to Top of Casing on 2/15/94

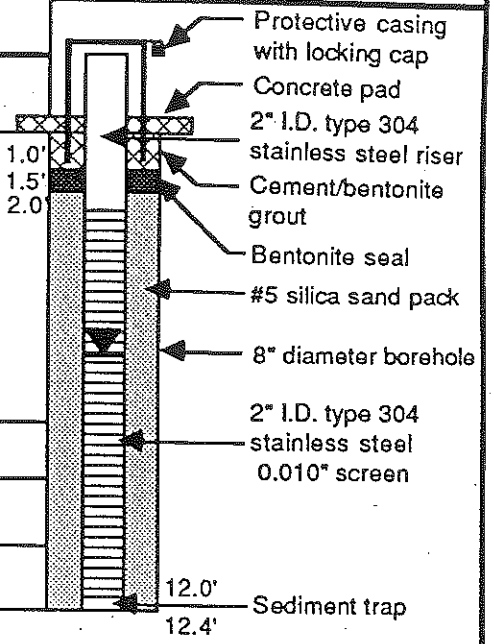
Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-J3

Depth (Feet)	Sample Location	Blows/ft. Sampler	% Recovery	HNu Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
						Top of Inner Casing Elevation: 890.02 feet, msl Ground Surface Elevation: 887.78 feet, msl
0						Brown silty CLAY with fine to medium sand, medium stiff, moist
						grades dark gray with strong odor from 2.0 to 3.0 feet grades with more fine to medium sand and slight odor at 4.0 feet
5		6	88	1.2		
						Brown silty very fine to fine SAND with trace clay, soft, wet
10		11	67	<1		Gray silty fine to coarse SAND with fine to medium gravel, medium dense, wet
						Brown very fine sandy CLAY with trace gravel, stiff, moist
						Boring completed at 12.4 feet on 1/11/94. Monitoring well installed at 12.0 feet on 1/11/94.
15						

WELL CONSTRUCTION DETAIL



LEGEND:

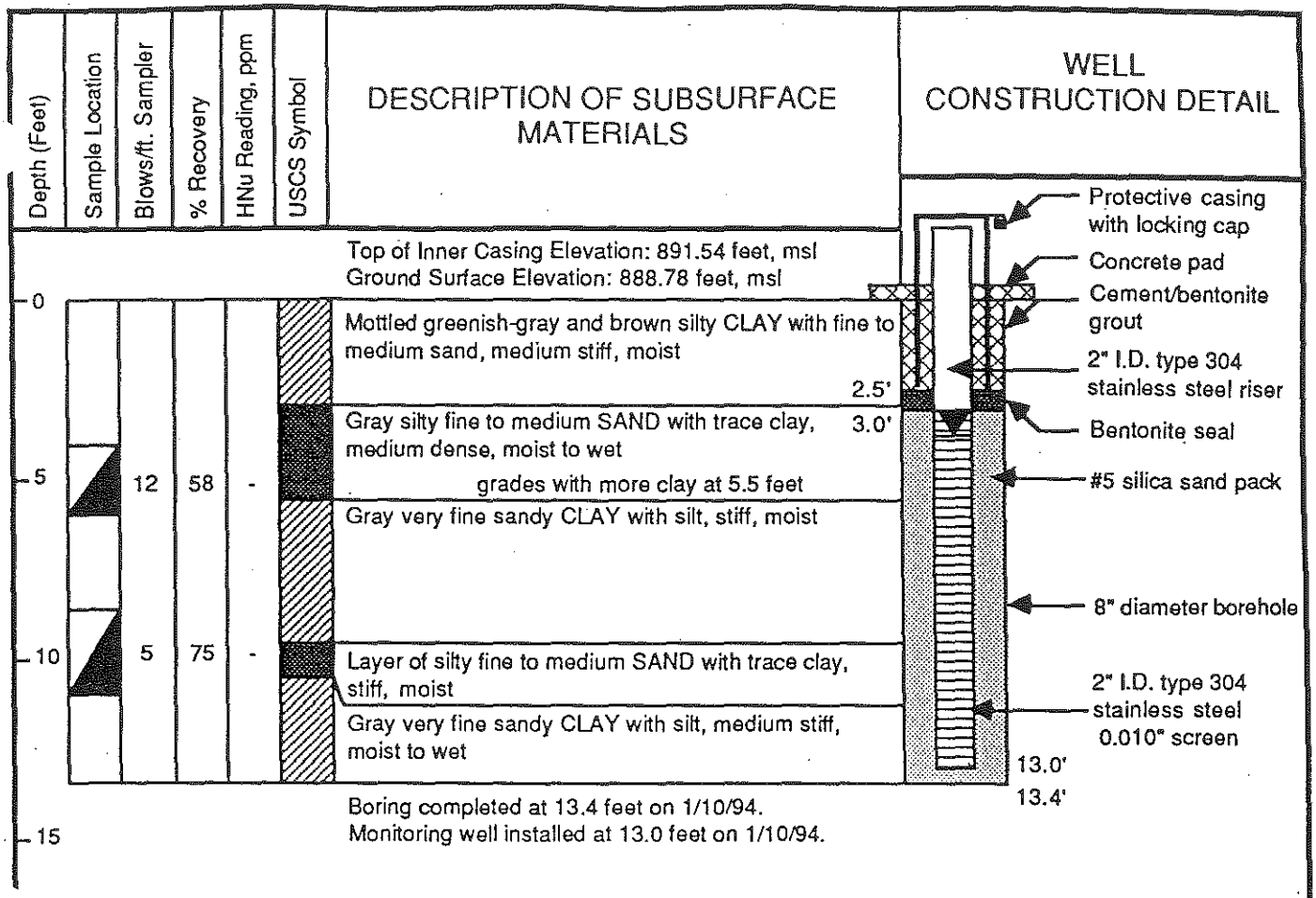
Split Spoon Sample

Ground Water Level Measured at 8.05 Feet, msl
Referenced to Top of Casing on 2/15/94

Dames & Moore
Job No. 03163-045-121

Stanley Tools
Fowlerville, Michigan

MONITORING WELL
MW-K1



LEGEND:

Split Spoon Sample

\- Not Recorded

Ground Water Level Measured at 8.32 Feet, msl
Referenced to Top of Casing on 2/15/94

Dames & Moore

Job No. 03163-045-121

Stanley Tools

Fowlerville, Michigan

MONITORING WELL
MW-L1

PHASE III BORING LOGS

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		100			Dark brown fine sandy LOAM with roots and gravel, friable, dry
			60.0		Brown very fine silty SAND, slightly moist
		30			Light gray fine sandy CLAY, stiff, moist
					no recovery
			100.9		Light brown very fine sandy SILT with gray staining, slightly moist
5		100	10.0		Light brown silty CLAY, stiff, slightly moist
			20.0		grades to light gray
		100	9.5		grades with fine sand
					Light gray fine sandy SILT, wet
		100	62		Light gray very fine sandy CLAY, soft, wet
10					grades medium stiff, moist
		100	48		grades with less sand, stiff

Boring completed at 12 feet on 6/22/00.
Temporary piezometer installed to a depth of 9 feet, screened interval from depth of 8-9 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 8-9 feet.
Soil analytical sample taken from depth of 4-5 feet.

15

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-1

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			3.1		Light brown sandy SILT, moist
		75	0.0		grade dark brown fine to medium
			0.0		Light brown silty CLAY, stiff, moist
		100	0.0		grades with gray streaks
5			0.0		grades with fine to medium sand
		100	0.0		
			0.0		
		100	0.0		grades wet
		100	1.2		Light brown fine to medium silty SAND, wet
			3.1		
10			8.1		grades to light gray fine sandy clay, stiff, moist
		50	8.6		
			9.1		grades to medium gravel
		83	8.0		grades with coarse gravel
			11.0		grades to light gray fine to medium silty sand with clay lenses, stiff, wet
15		100	10.2		
					grades with coarse sand and gravel and without clay
		100	8.8		
			9.0		Light gray fine sandy CLAY, stiff, moist
20					

Boring completed at 18 feet on 6/21/00.
Temporary piezometer installed to a depth of 17 feet, screened interval from depth of 16-17 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 16-17 feet.
Soil analytical sample taken from depth of 9-10 feet.

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

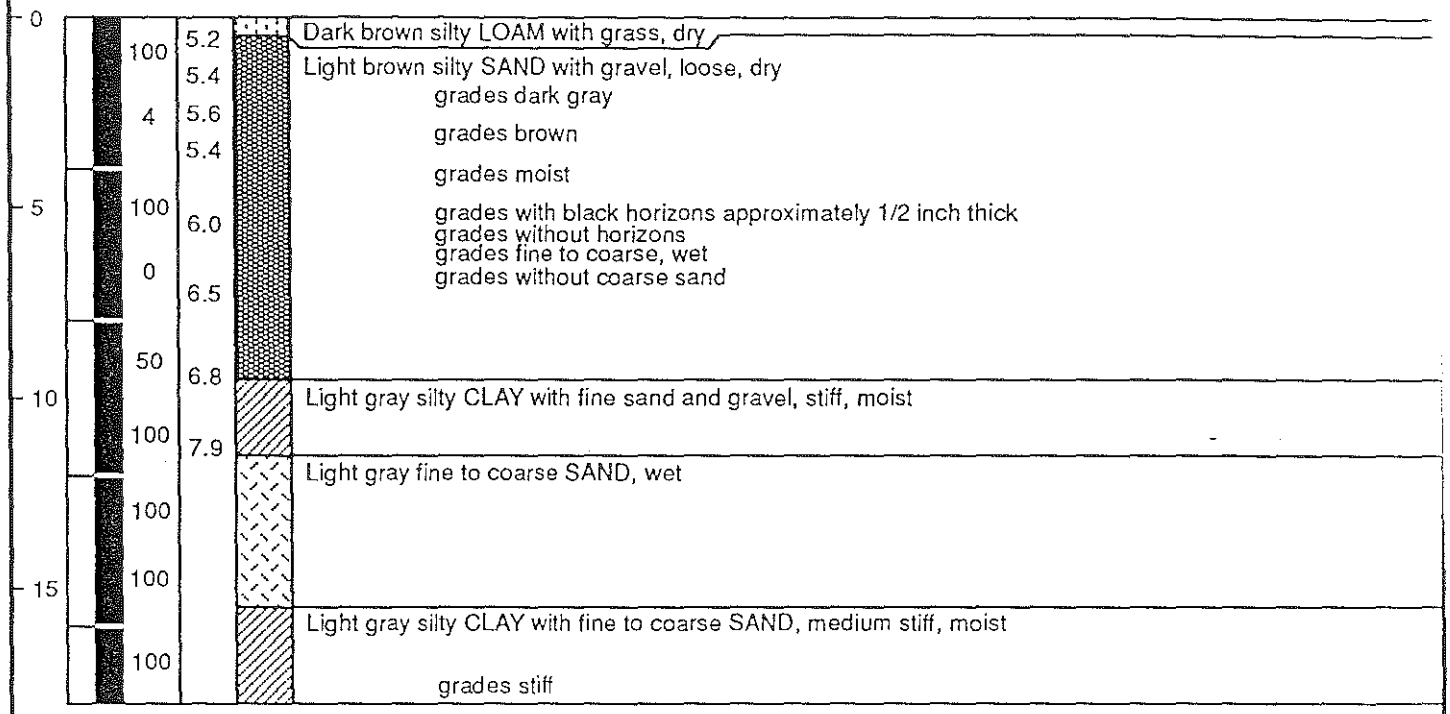
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-2



Boring completed at 18.0 feet on 6/20/00.
Temporary piezometer installed to a depth of 15 feet, screened interval from depth of 13-15 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 13-15 feet.
Soil analytical sample taken from depth of 9-10 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

JOHNSON CONTROLS – 20209-016-0505-121

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-3

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		13	0.4		Dark brown silty LOAM with grass, friable
		100	0.1		Light brown silty CLAY, stiff, slightly moist
			0.0		grades with fine sand
5		0	NA		no recovery
		100	0.0		Light brown fine to medium silty SAND, wet
			0.0		grades to light gray
		100			Light gray fine to medium SAND, wet
10			0.0		grades silty
		100			Light gray fine to medium sandy CLAY, stiff, moist
15					

Boring completed at 12.0 feet on 6/21/00.
Temporary piezometer installed to a depth of 10 feet, screened interval from depth of 9-10 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 9-10 feet.

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

NA Not Available

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-4

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		100	0.0		Dark brown fine sandy LOAM with roots, friable, dry
			0.0		grades gray with gravel and without roots
			0.0		Light brown fine silty SAND, dry
		100	0.0		Dark brown silty CLAY, very stiff, dry
			0.0		grades light gray
					grades to brown fine and sandy
					grades gray
5		100	0.0		grades to light gray and silty with fine to medium sand, stiff, moist
			0.0		grades light brown with gravel
		100	0.0		grades gray without gravel
			0.0		grades to light gray very fine sandy clay, wet
			0.0		Light gray fine to medium SAND, wet
		100	0.0		grades silty
10			0.0		Light gray fine to medium sandy CLAY, stiff, moist
		100	0.0		grades with pebbles of gravel

Boring completed at 12.0 feet on 6/21/00.
Temporary piezometer installed to a depth of 10 feet, screened interval from depth of 9-10 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 9-10 feet.

15

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

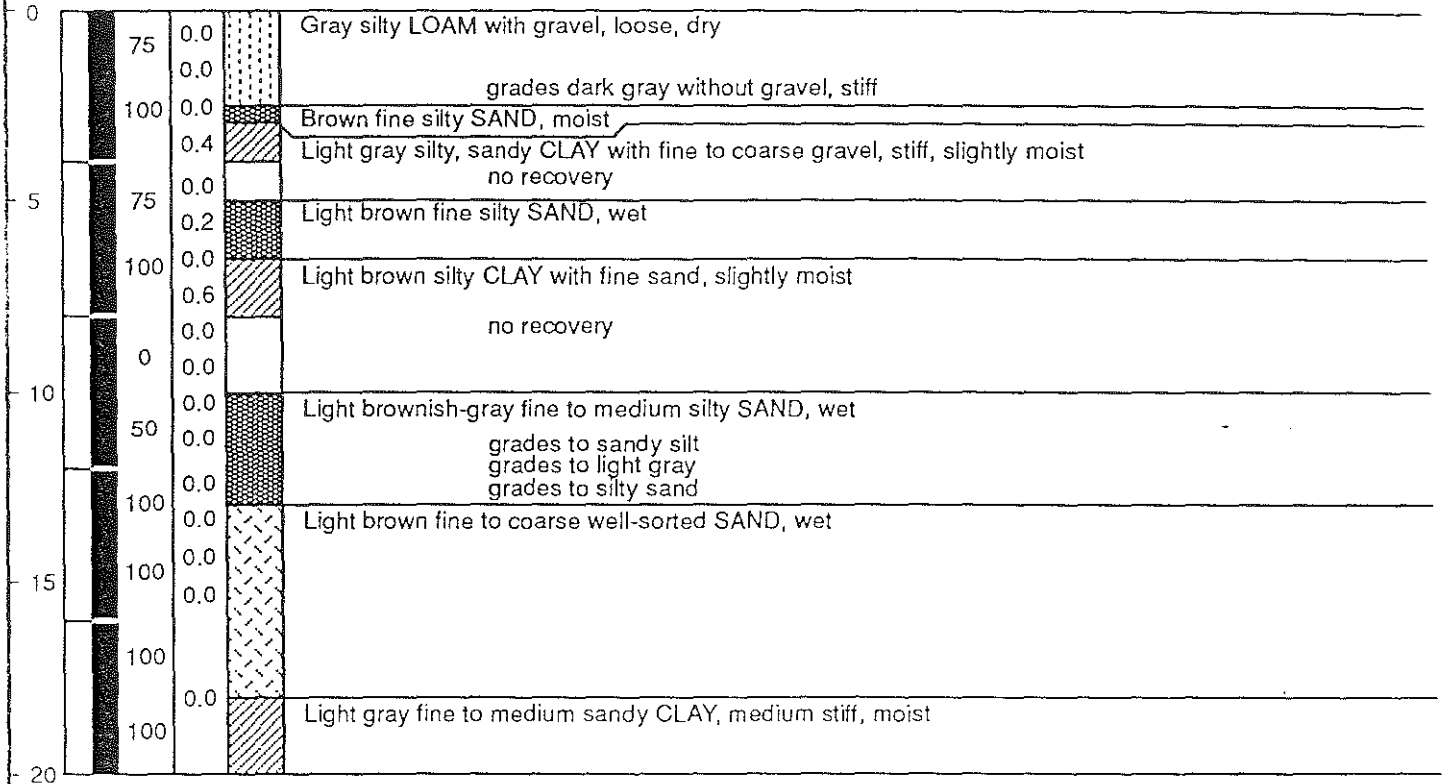
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-5



Boring completed at 20.0 feet on 6/20/00.
Temporary piezometer installed to a depth of 12 feet, screened interval from depth of 11-12 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 11-12 feet.
Soil analytical sample taken from depth of 7-8 feet.

LEGEND:

Direct Push Sample

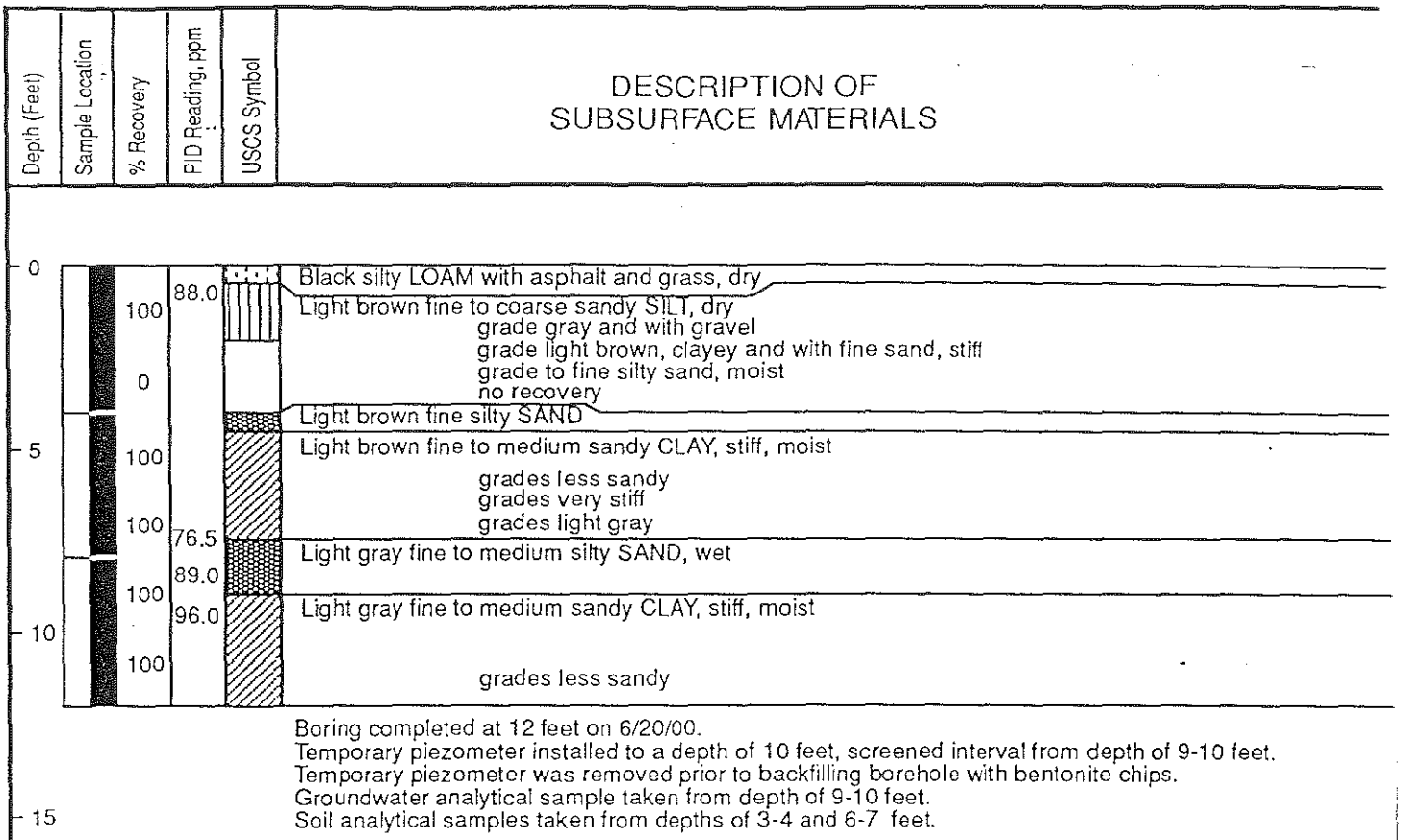
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-6



JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-7

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		100	12.1		ASPHALT and GRAVEL
			10.1		Light brown fine to coarse silty SAND and GRAVEL, friable, dry
		50	29.8		Dark brown fine sandy SILT, very stiff, dry
					grades to brown and clayey
					grades with gravel
					grades to light brown medium to fine sandy silt, stiff, moist
					no recovery
5		100	15.0		grades to light brown medium to fine sandy silt, stiff, moist
			9.8		Light brown silty CLAY with fine sand, stiff, slightly moist
		100	4.6		grades light gray, moist
			70.6		grades with coarse sand
		100	16.5		Light grayish-brown fine to medium SAND, wet
			11.2		grades silty and fine with clay
10		100	8.0		Light gray silty CLAY with coarse sand, medium stiff, moist
			0.0		grades stiff

Boring completed at 12 feet on 6/22/00.
Temporary piezometer installed to a depth of 9 feet, screened interval from depth of 8-9 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 8-9 feet.
Soil analytical sample taken from depth of 6.5-7.5 feet.

15

LEGEND:

Direct Push Sample

PID Photoionization Detector

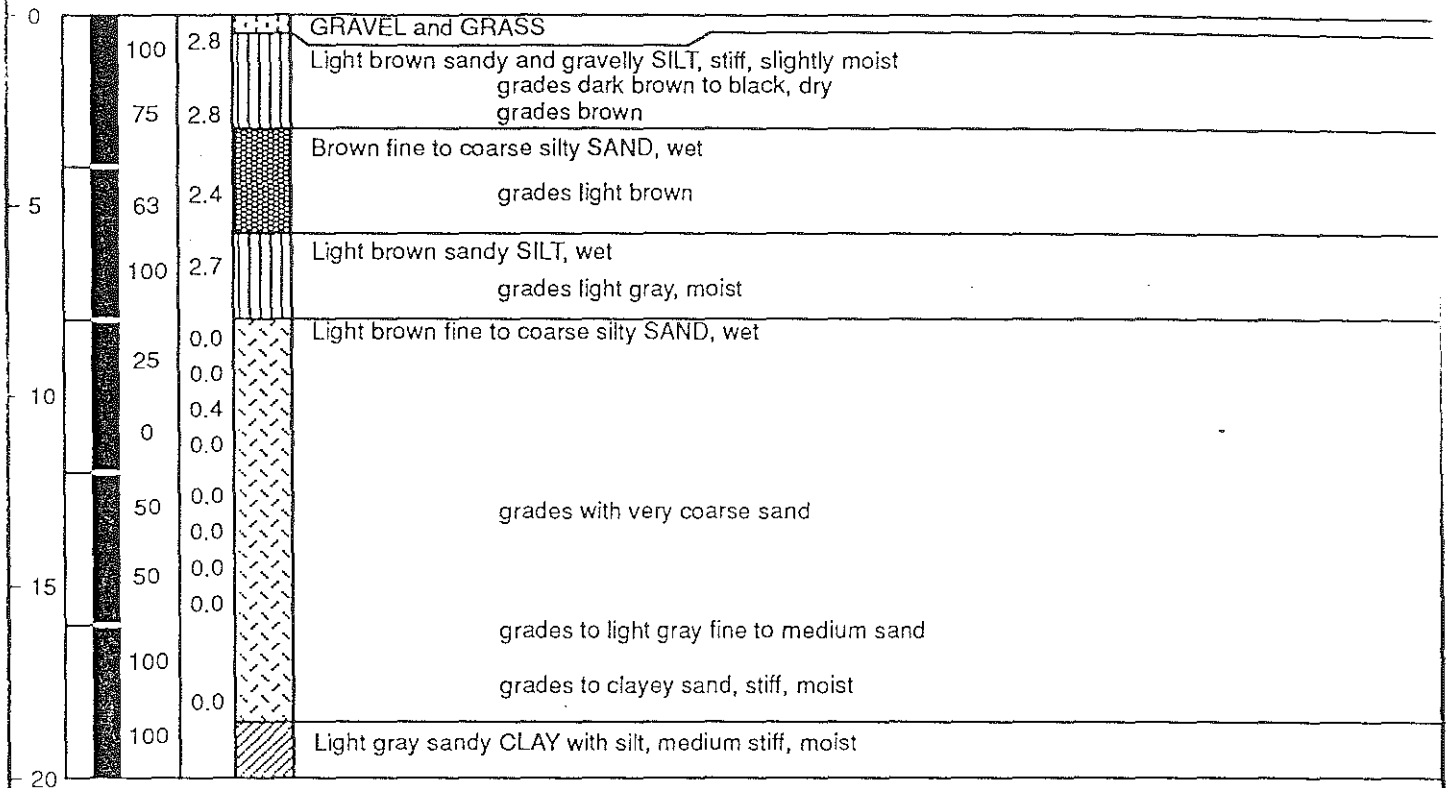
JOHNSON CONTROLS – 20209-016-0505-121

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-8



Boring completed at 20 feet on 6/22/00.
Temporary piezometer installed to a depth of 18 feet, screened interval from depth of 17-18 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 17-18 feet.
Soil analytical sample taken from depth of 7-8 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-9

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		75	0.0		Dark brown very fine sandy LOAM with roots, medium stiff, slightly moist
			0.6		Brown very fine to fine sandy SILT, stiff, dry
		100	1.2		Light gray very fine to medium SAND, very stiff, moist
			1.6		grades silty
					grades without silt and some coarse sand, wet
5		100	0.0		grades silty
			0.0		Light brownish-gray silty CLAY, very stiff, moist

Boring completed at 6 feet on 6/22/00.
Temporary piezometer installed to a depth of 5 feet, screened interval at a depth of 4-5 feet.
Temporary piezometer was removed prior to backfilling with borehole with bentonite chips.
Groundwater analytical sample taken at depth of 4-5 feet.

10

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-9S

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		100	0.8		Dark brown silty SAND with grass, friable, moist
			0.5		grades with some clay
			NA		
		0	NA		no recovery
5		100	0.0		Dark brown fine silty SAND with clay, moist
			0.3		grade light brown and without clay
			0.0		Light brown silty CLAY, stiff, moist
					grades soft
		100	0.1		grades with coarse sand and gravel, stiff
					grades with fine gravel, soft, wet
10		100	0.0		Light brown fine to medium SAND, wet
			0.3		
			0.0		grades to coarse sand
		100	0.0		Light gray silty CLAY, stiff, moist
15		100			Light gray fine to medium SAND, soft, wet
					grades silty with some clay
		100	0.0		grades without silt or clay
			7.0		grades very fine, silty, stiff
		100	0.0		
20		100	0.0		

Boring completed at 20 feet on 6/21/00.
Temporary piezometer installed to a depth of 11 feet, screened interval from depth of 10-11 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 10-11 feet.

25

LEGEND:

Direct Push Sample

PID Photoionization Detector

NA Not Available

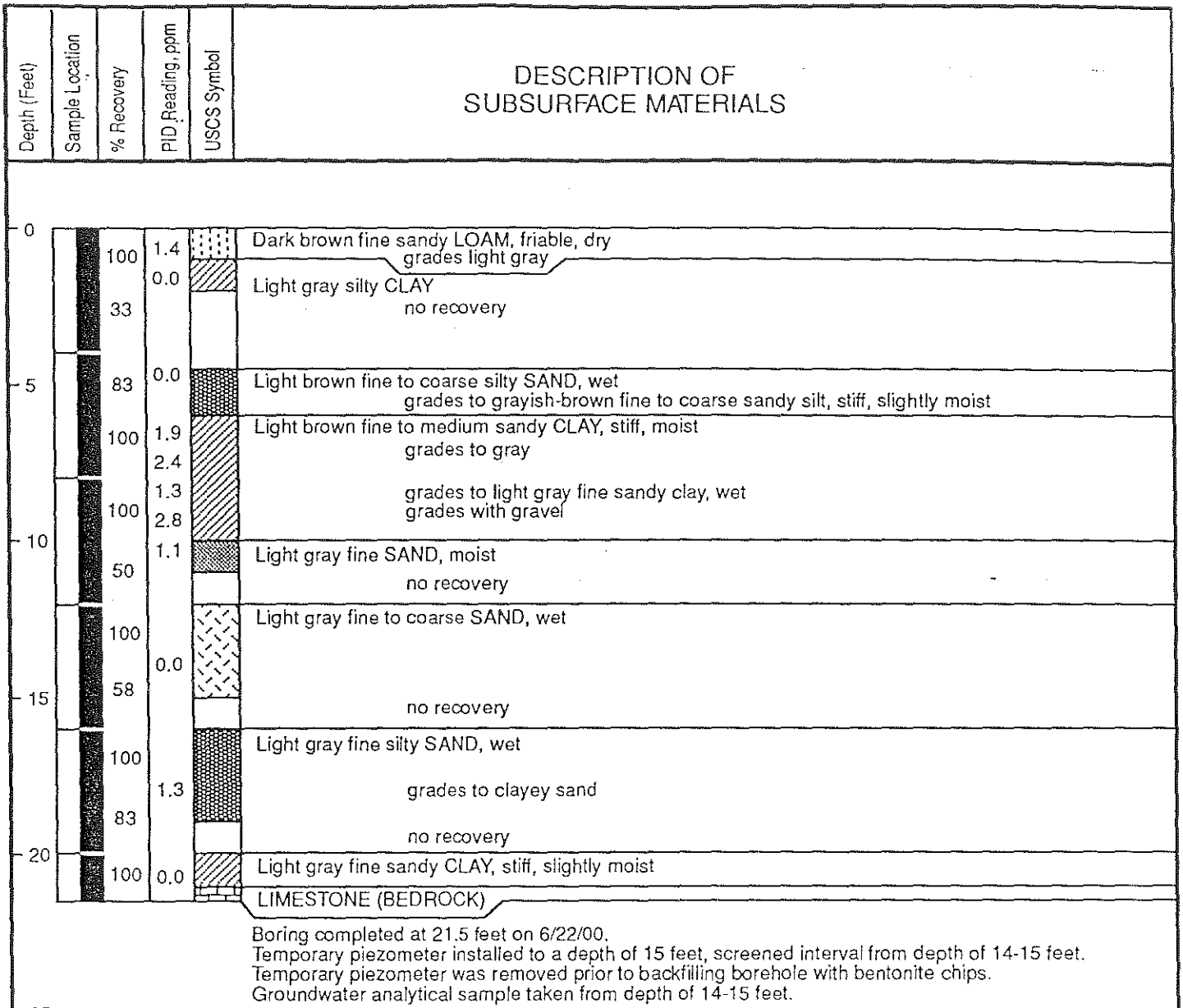
JOHNSON CONTROLS – 20209-016-0505-121

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-10



Boring completed at 21.5 feet on 6/22/00.
Temporary piezometer installed to a depth of 15 feet, screened interval from depth of 14-15 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 14-15 feet.

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-11

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			0.0		Light gray silty GRAVEL with grass and roots, friable
		100	0.0		Dark reddish-brown very fine sandy SILT, dry
					grades to fine sand
			1.0		Light gray very fine sandy CLAY, medium stiff
		33	0.0		no recovery
5			0.0		Light gray fine to medium SAND, moist
		100	0.0		grades to brown and fine, wet
			0.0		Light grayish-brown fine to medium sandy CLAY, medium stiff, moist
		75	0.0		
			0.0		no recovery
		0	0.0		
10			0.0		Light brown fine to medium silty SAND, moist
		67	0.0		Light gray fine to medium SAND, wet
					no recovery
		0	NA		
15		25	NA		Grayish-brown sandy CLAY, medium stiff, wet
			0.0		Light brown very fine to fine SAND, wet
		100	0.0		
			0.0		grades with thin seams of light gray sandy clay, moist
		100	0.0		grades to light gray and fine to coarse, wet
20			0.0		Light gray silty CLAY, stiff, moist
		100	0.0		FRAGIAPAN or LIMESTONE BEDROCK

Boring completed at 22 feet on 6/21/00.
Temporary piezometer installed to a depth of 20 feet, screened interval from depth of 19-20 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 19-20 feet.

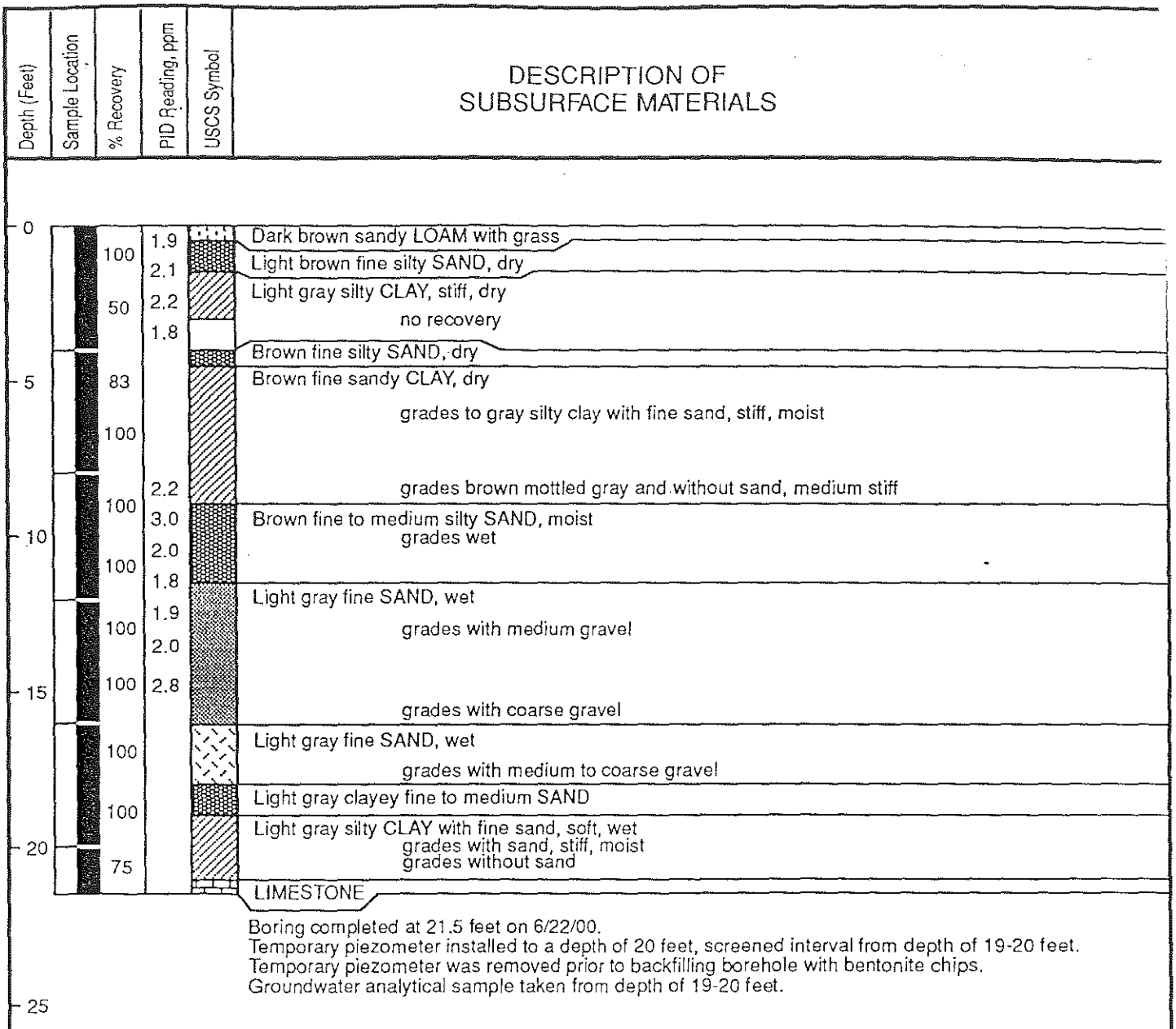
25

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

- Direct Push Sample
- PID — Photoionization Detector
- NA — Not Available

URS JOB NO. 20209-016-121	Johnson Controls, Inc. FORMERLY STANLEY TOOLS FACILITY FOWLERVILLE, MICHIGAN	SOIL BORING TCE-12



Boring completed at 21.5 feet on 6/22/00.
Temporary piezometer installed to a depth of 20 feet, screened interval from depth of 19-20 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 19-20 feet.

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-13

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		75	0.6		Dark brown fine sandy SILT with grass, dry
			3.3		Light grayish-brown fine silty SAND, dry
		100	2.6		Dark brown fine silty CLAY, medium stiff, dry
			0.6		grades to gray
5		83	0.9		grades stiff
			0.3		Light brown fine sandy SILT, wet
			3.0		grades dry
		100	4.6		grades wet
			3.0		Light yellowish-brown silty CLAY with coarse sand, stiff, slightly moist
			1.9		grades to light gray, medium stiff, moist
		67	2		grades soft
			2.7		no recovery
			3.8		Light brown with gray silty CLAY with very fine sand, soft, wet
10			2.0		Light brown very fine silty SAND, wet
		100	2.5		Light gray silty CLAY with fine sand, soft, wet
			1.7		grades with coarse sand
			1.5		grades with gravel
		100	0.0		Light gray very fine to fine silty SAND, wet
			0.0		grades medium to coarse
			0.0		grades fine to medium
15		100	0.0		grades medium to coarse
			0.0		grades fine
			0.0		Light gray silty CLAY with very fine sand, soft, wet
		50	0.0		no recovery
			0.0		Light gray silty CLAY with fine sand, soft, wet
		100	0.0		grades with coarse sand
20			0.0		grades without sand, very stiff, dry

Boring completed at 20.0 feet on 7/11/00.
Temporary piezometer installed to a depth of 18 feet, screened interval from depth of 16.5-18 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 17-18 feet.

25

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-14

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		83	0.0		Dark brown and light brown silty LOAM with coarse sand, friable, dry
			0.0		grades with asphalt chunks
			0.0		Dark brown clayey SILT with coarse sand, stiff, dry
		100	1.0		BRICK
			0.0		Dark brown silty CLAY, stiff
			1.3		Light brown fine silty SAND, dry
5		100			Yellowish-brown fine sandy SILT, moist
			7.9		
			18.0		Light gray silty CLAY, very stiff, slightly moist
		100	42.0		Light brown fine silty SAND, wet
			59.0		
			57.0		Light gray silty CLAY with fine sand, stiff, slightly moist
10					

Boring completed at 8.0 feet on 7/11/00.
Temporary piezometer installed to a depth of 7 feet, screened interval from depth of 6-7 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 7-7.5 feet.
Soil analytical sample taken from depth of 7-8 feet.

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

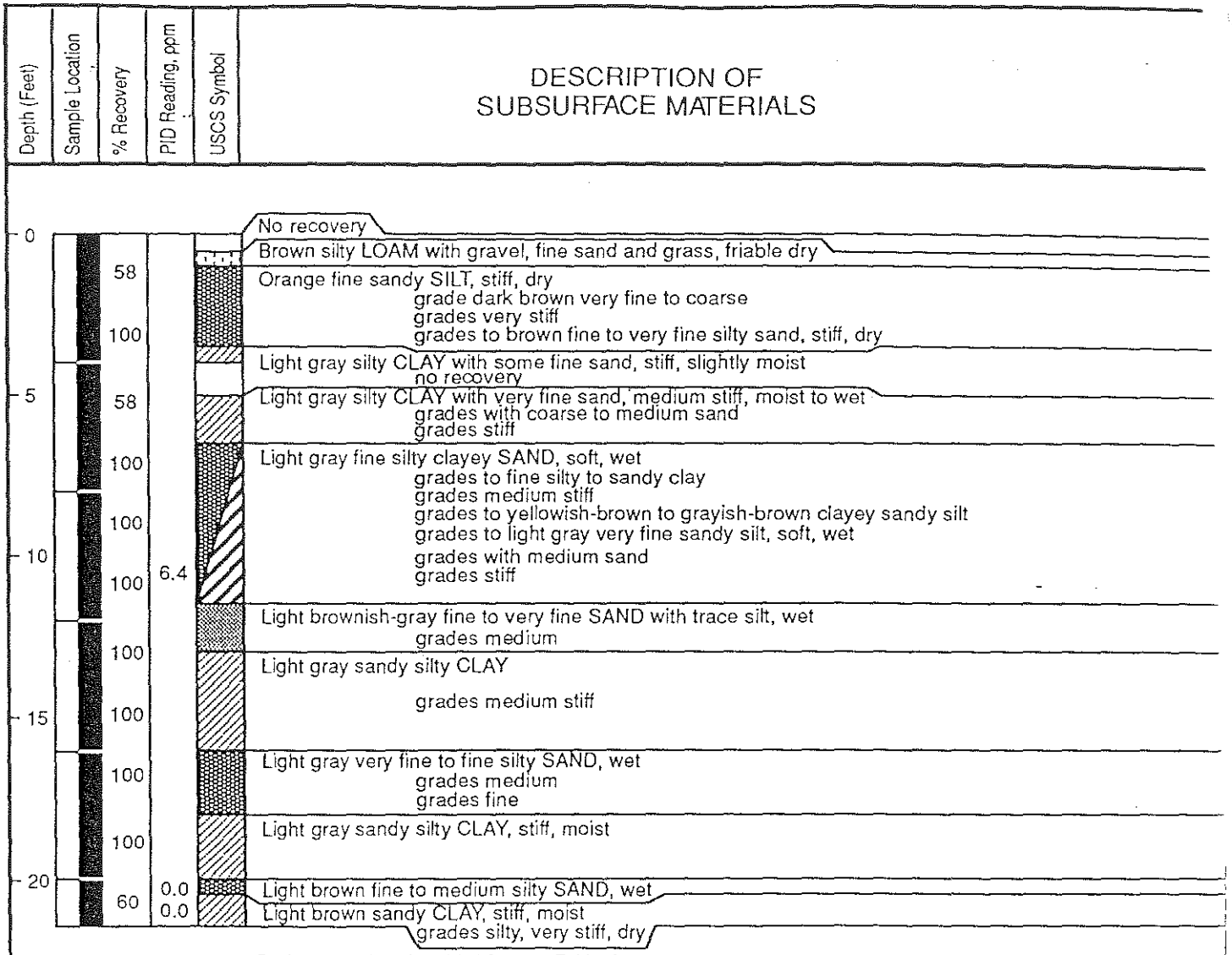
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-15



Boring completed at 21.5 feet on 7/11/00.
Temporary piezometer installed to a depth of 18 feet, screened interval from depth of 16.5-18 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 17-18 feet.

LEGEND:

Direct Push Sample

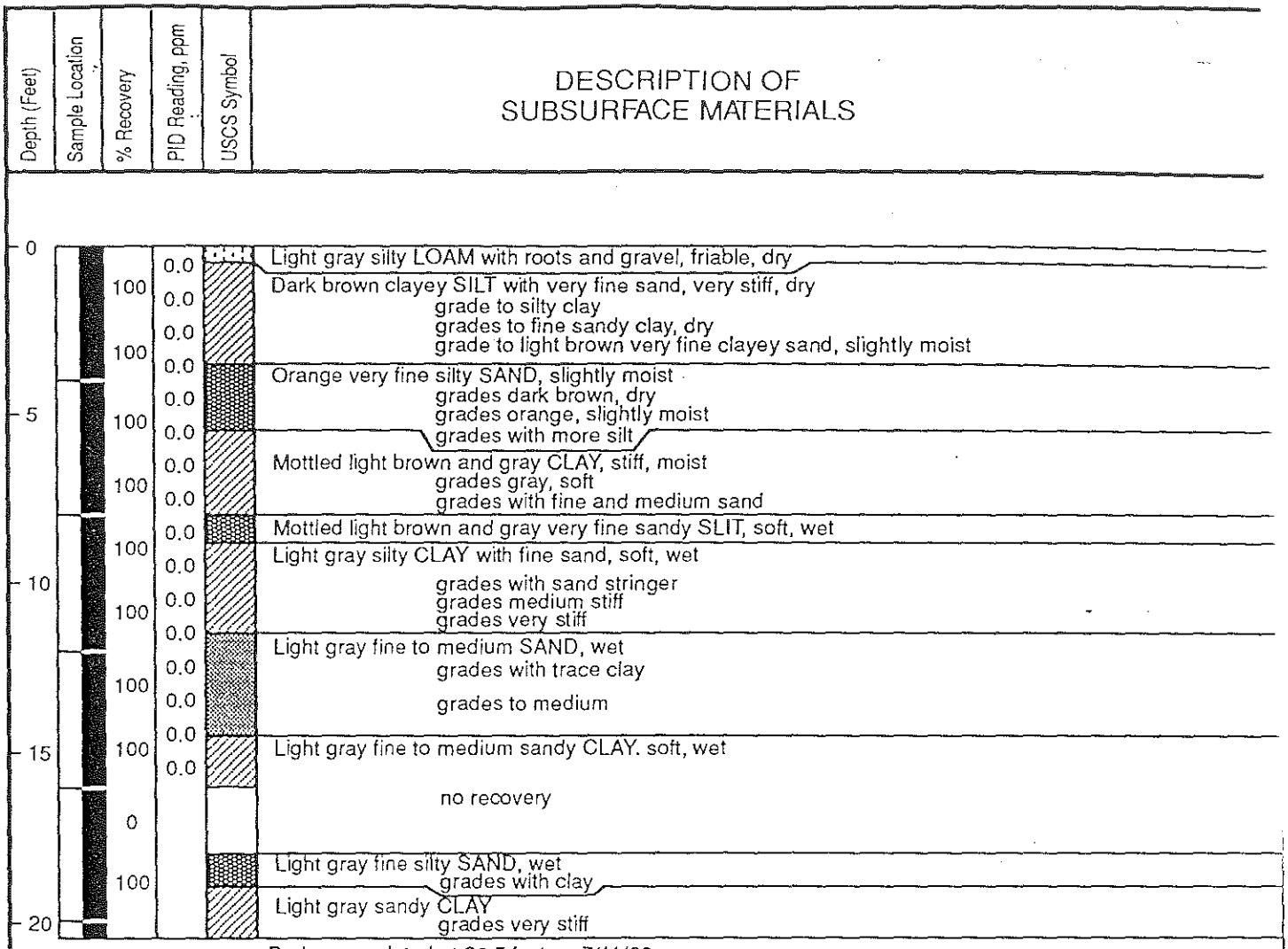
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-16



Boring completed at 20.5 feet on 7/11/00.
Temporary piezometer installed to a depth of 13 feet, screened interval from depth of 11.5-13 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 12-13 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

JOHNSON CONTROLS - 20209-016-0505-121

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-17

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0					No Recovery
		75	0.4		Brown silty LOAM, friable, dry
			0.5		Brown medium to fine SAND
					grades with light gray gravel
			0.1		grades without gravel
		100	0.1		Dark brown silty CLAY with some fine sand, very stiff, dry
					grades with medium sand, stiff
					grades light brown, without sand, very stiff
5		75	0.0		grades with coarse sand
			0.0		grades without coarse sand
			0.0		grades gray
		100	0.0		grades stiff, moist
					grades medium stiff
		100	0.0		grades soft
			0.0		
10					grades stiff
		100	0.0		Light brown very fine SAND, wet
			0.0		grades fine to medium
			0.0		grades with silt
		100	0.0		Light gray silty SAND with clay, soft, wet
			0.0		grades to sandy silt
15		100	0.0		grades with clay, moist
			0.0		Light gray silty CLAY with fine sand, soft, moist
20					

Boring completed at 20.0 feet on 7/11/00.
Temporary piezometer installed to a depth of 11 feet, screened interval from depth of 10-11 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 10-11 feet.
Soil analytical sample taken from depth of 6-6.5 feet.

25

LEGEND:

Direct Push Sample

PID Photoionization Detector

JOHNSON CONTROLS – 20209-016-0505-121

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-19

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			0.0		Dark brown clayey SILT with medium sand, very stiff, dry
		100	0.0		Brown silty CLAY, very stiff, dry
			151.84		grade with coarse sand and gravel
		100	21.8		
			91.2		grade bluish-gray, very stiff
5		100	98.7		
			46.5		grades to light gray clayey silt, very stiff, dry
			0.0		
		100	0.0		grades moist
			0.0		grades medium stiff
			0.0		grades with black and dark gray
		100	186.0		Brown fine to medium SAND
10			2.9		
		25	25		No Recovery
			0.0		
15					

Boring completed at 12.0 feet on 7/11/00.
Temporary piezometer installed to a depth of 11 feet, screened interval from depth of 9.5-11 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 10-11 feet.
Soil analytical sample taken from depth of 8-8.5 feet.

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

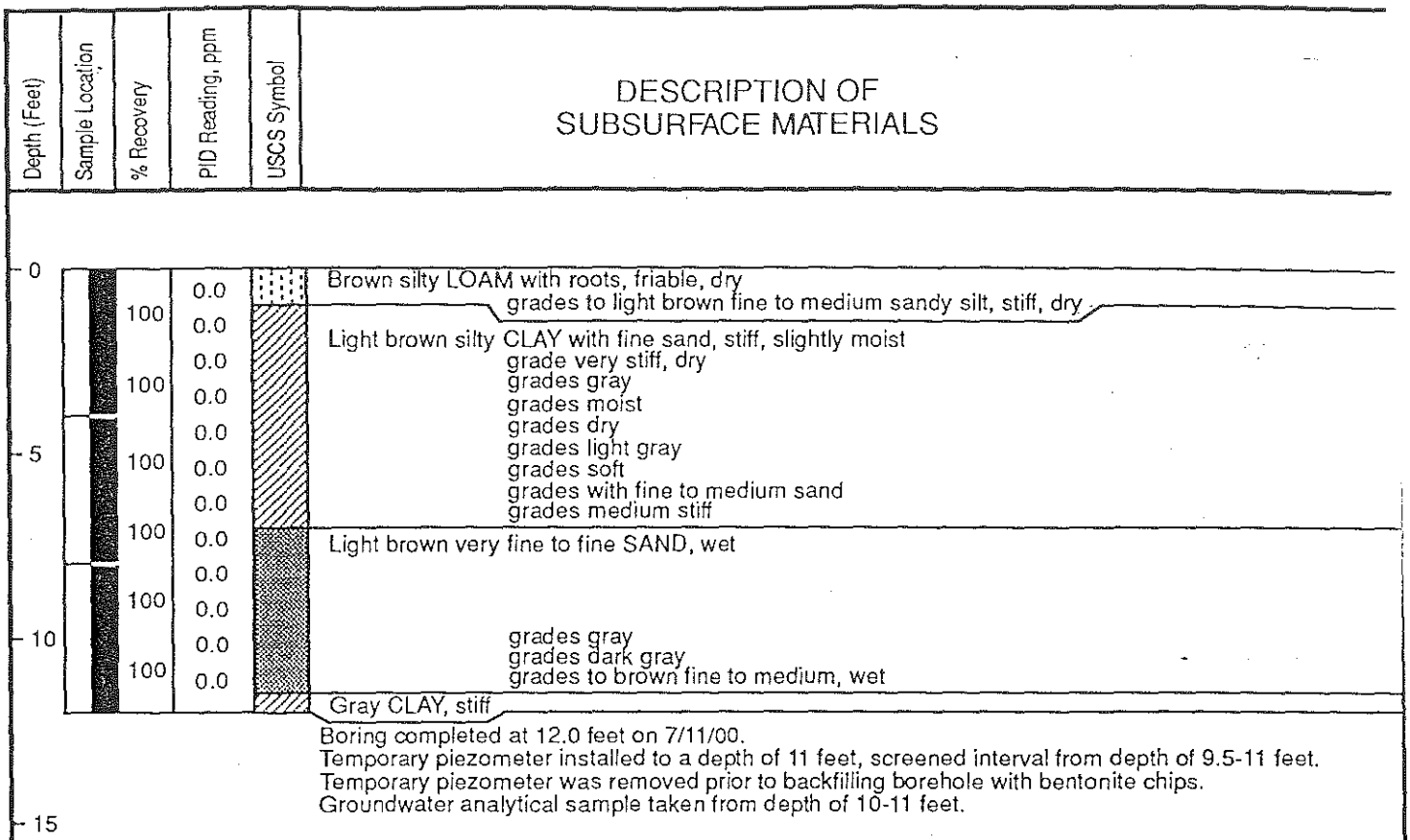
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-20



JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-21

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			4.1		Light grayish-brown clayey SILT with fine sand, very stiff, dry
			1.4		
		92	2.0		Light grayish-brown silty CLAY, very stiff, dry
			2.2		grade with brick
			1.8		grade without brick
			1.2		grades with olive
		100	1.1		grades to brown
			1.2		
			0.3		grades with coarse sand
5		100	0.0		grades moist
			0.0		grades with medium sand and without coarse sand
			0.0		grades to dark gray
			0.0		
		100	7.8		Black very fine SAND, wet
			9.6		
			0.0		
		100	0.0		grades brownish-gray
			1.1		
10			4.9		grades to medium with fine sand
			4.0		
		100	2.0		
			4.1		Light gray silty CLAY with fine sand, stiff, moist
			0.0		grades very stiff, dry
15					

Boring completed at 12.0 feet on 7/11/00.
Temporary piezometer installed to a depth of 9 feet, screened interval from depth of 7.5-9 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 8-9 feet.

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

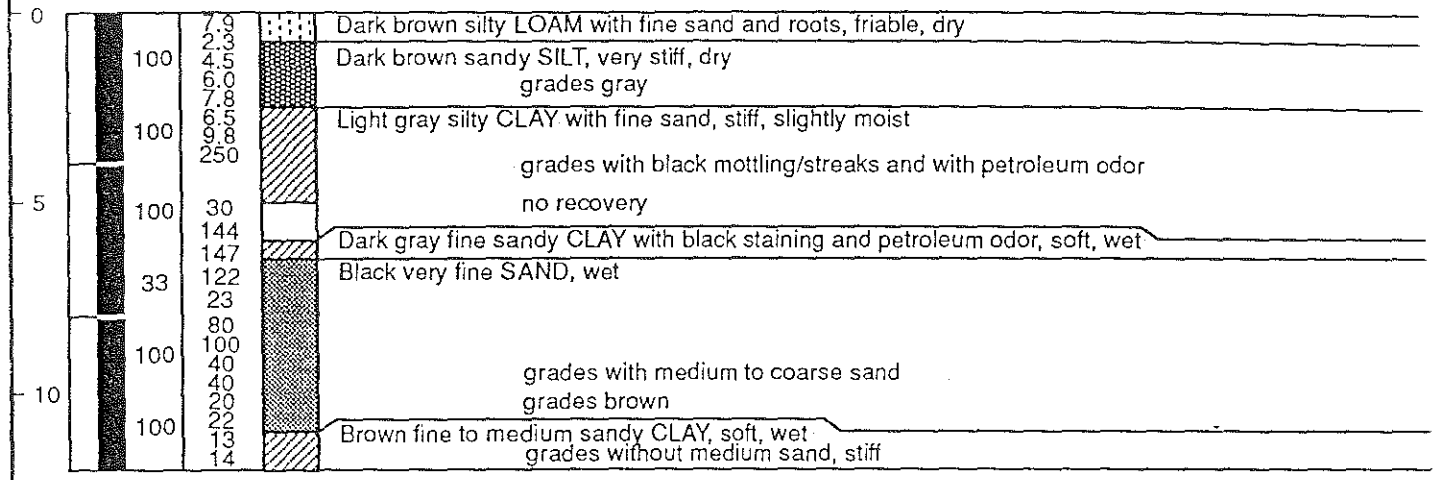
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-24



Boring completed at 12.0 feet on 7/12/00.
Temporary piezometer installed to a depth from 10 feet, screened interval from depth of 8-10 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 8-10 feet.
Soil analytical sample taken from depth of 6-6.5 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-25

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0		83	0.0		Light brown silty LOAM with roots, friable, dry
			0.0		grades gray and with gravel
			0.0		grades dark brown
			0.0		Light brown fine sandy SILT with clay, stiff, dry
		100	0.0		grades to orangish-brown
			0.0		Light gray silty CLAY with fine sand, stiff, slightly moist
5		100	0.0		grades with medium sand and some gravel
			0.0		grades without gravel
			0.0		grades wet
		25	0.0		Light brownish-gray fine SAND, wet
			0.0		
		100	0.0		no recovery
			0.0		grades with gray
10			0.0		grades medium to coarse
		100	0.0		grades fine to medium
			0.0		Gray fine sandy CLAY, stiff, wet
		100	0.0		grades light gray and fine to medium, medium stiff, moist
15					

Boring completed at 13.0 feet on 7/12/00.
Temporary piezometer installed to a depth of 11 feet, screened interval from depth of 8-10 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 9.5-11 feet.
Soil analytical sample taken from depth of 5-5.5 feet.

JOHNSON CONTROLS -- 20209-016-0505-121

LEGEND:

Direct Push Sample

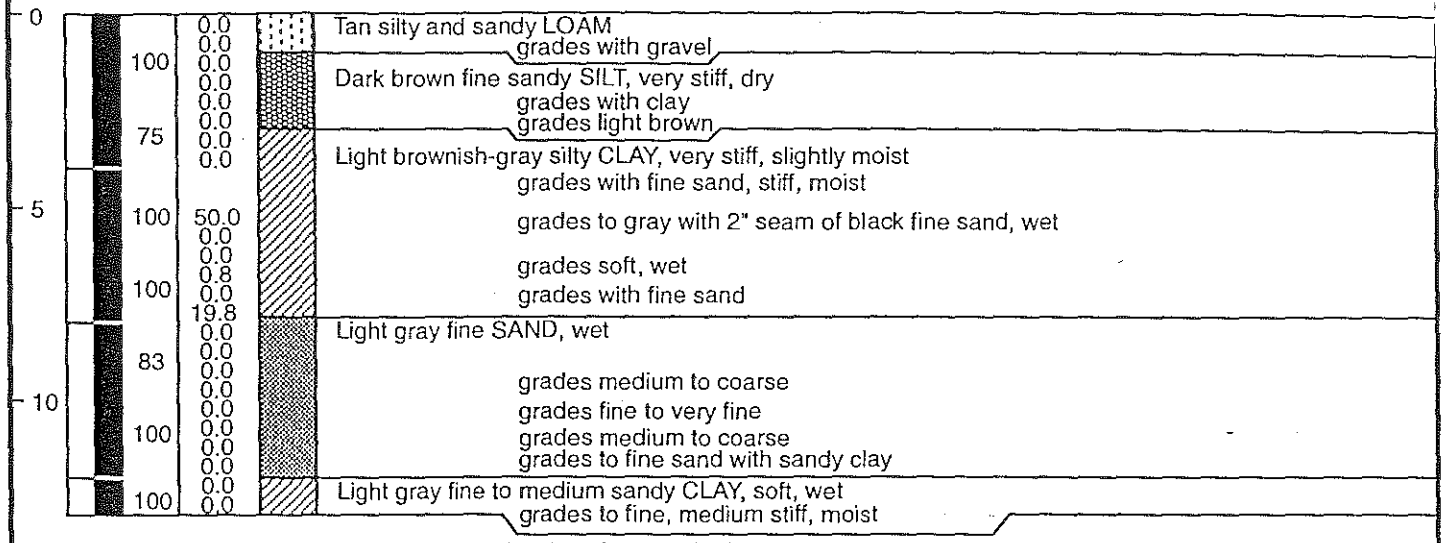
PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-29



Boring completed at 13.0 feet on 7/12/00.
Temporary piezometer installed to a depth of 11 feet, screened interval from depth of 8-10 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 9 -11 feet.
Soil analytical sample taken from depths of 5-5.5 and 7-8 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-33

JOHNSON CONTROLS – 20209-016-0505-121

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			0.0		Brown silty LOAM with gravel and roots, friable, dry
		100	0.0		
			0.0		
			0.0		Gray silty CLAY, stiff, slightly moist
			0.0		grades black with fine sand
			0.0		
		17	0.0		no recovery
			14.3		
			10.3		
5		75	10.3		Dark gray fine silty and sandy CLAY, stiff, moist
			0.0		
			0.7		
		100	0.9		
			5.6		
			22.0		
					no recovery
		83	0.0		Light gray fine sandy CLAY with oil, very soft, moist
10			2.2		Black fine SAND with sheen, wet
			11.1		grades to gray
		100	280		grades to light gray
			0.0		grades with medium to coarse sand
			0.0		grades without medium to coarse sand
			2.1		grades with clay
		100	3.0		grades without clay and with medium to coarse sand
			0.0		
			0.0		Light gray fine to medium sandy CLAY, stiff, moist
			0.0		
15		100	0.0		grades with medium sand layer, wet
			0.0		grades to fine sandy clay

Boring completed at 16.0 feet on 7/12/00.
Temporary piezometer installed to a depth of 12 feet, screened interval from depth of 10-12 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 10-12 feet.
Soil analytical,sample taken from depths of 7-8 and 9-9.5 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

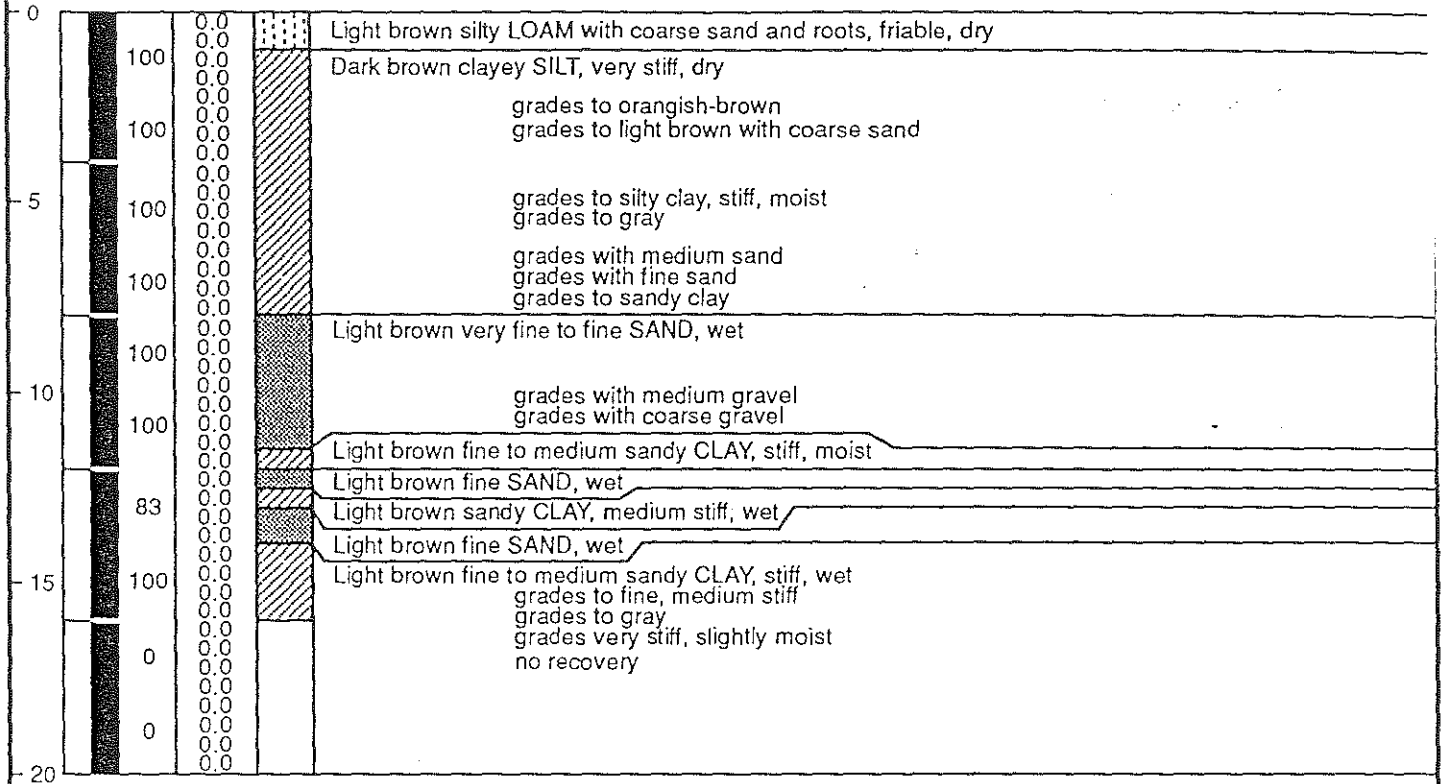
URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-34

JOHNSON CONTROLS – 20209-016-0505-121



Boring completed at 20.0 feet on 7/12/00.
Temporary piezometer installed to a depth of 11.5 feet, screened interval from depth of 10-11.5 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 10-11.5 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-35

JOHNSON CONTROLS – 20209-016-0505-121

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			0.0		Brown silty LOAM with fine sand and roots, soft, moist
			0.0		
		88	0.0		Brown fine sandy SILT, medium stiff, moist
			0.0		grades with light gray rock pieces
					no recovery
		0			
5		100	260		Light gray silty CLAY with fine sand
			11.0		
			52.0		grades with black
			22.0		Black very fine SAND, medium stiff, wet
		100	0.0		grades to gray and fine
			0.0		
			14.5		
		100	32.0		
			28.0		
10			220		grades brown
			1.3		
		100	1.8		grades with medium to coarse sand
			3.5		
			3.3		
			ND		Light brown fine to medium sandy CLAY, medium stiff, moist
		100	ND		grades without medium sand, stiff
			NR		grades very stiff, slightly moist
			NR		
15					

Boring completed at 14.0 feet on 7/12/00.
Temporary piezometer installed to a depth of 9 feet, screened interval from depth of 7-9 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 7-9 feet.
Soil analytical sample taken from depth of 6-6.5 feet.

LEGEND:

- Direct Push Sample
- PID Photoionization Detector
- NR Not Recorded

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-37

JOHNSON CONTROLS - 20209-016-0505-121

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			2.7		Light brown silty LOAM with roots, friable, dry
			8.9		
		100	5.2		Light brown fine sandy SILT with clay, stiff, slightly moist
			4.0		
			2.5		grades orangish-brown
			3.1		
		100	2.3		Light brown CLAY
			2.0		grades to gray
					no recovery
5		50	1.7		Light gray silty CLAY, very stiff, slightly moist
			1.9		
			2.0		grades with medium sand, moist
			12.1		
		100	21.0		grades soft
			144		Light gray SAND
			11.7		
		100	13.7		
			12.9		
10			3.9		grades medium to coarse
			0.7		
		100	0.4		
			0.8		
			0.8		Light brownish-gray CLAY

Boring completed at 12.0 feet on 7/12/00.
Temporary piezometer installed to a depth of 9 feet, screened interval from depth of 7-9 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 7-9 feet.
Soil analytical sample taken from depth of 9-9.5 feet.

15

JOHNSON CONTROLS – 20209-016-0505-121

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-38

Depth (Feet)	Sample Location	% Recovery	PID Reading, ppm	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			0.0		Light brown silty LOAM with roots, friable, dry
			0.0		grades with gravel
		83	0.0		Light brown fine silty SAND, stiff, dry
			0.0		no recovery
		0			
			0.0		
			0.0		Light brown fine silty SAND, slightly moist
5			1.1		
		100	29.2		Brown fine sandy CLAY, stiff, moist
			29.1		grades to dark gray with slight sheen
			11.1		grades soft
		0			no recovery
					Dark brown fine sandy CLAY, stiff, moist
		75	2.3		
			15.4		grades to gray
			9.7		grades soft
10			2.5		
		100	1.7		Black fine SAND with some medium to coarse sand and petroleum sheen
			0.0		
			0.8		grades to brown fine to medium sand, wet
		100	0.0		
			0.0		grades to medium to coarse sand
			0.0		
			0.0		Light brownish-gray fine to medium sandy CLAY, medium stiff, moist
		100	0.2		grades without medium sand
15			0.2		grades stiff

Boring completed at 15.0 feet on 7/12/00.
Temporary piezometer installed to a depth of 11.5 feet, screened interval from depth of 10-12 feet.
Temporary piezometer was removed prior to backfilling borehole with bentonite chips.
Groundwater analytical sample taken from depth of 10-12 feet.
Soil analytical sample taken from depth of 5-6 feet.

LEGEND:

Direct Push Sample

PID Photoionization Detector

URS

JOB NO. 20209-016-121

Johnson Controls, Inc.
FORMERLY STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

SOIL BORING
TCE-39

APPENDIX G

APPENDIX G

PROSSER (1981) ARTICLE

APPENDIX G

PROSSER (1981) ARTICLE

A Method of Performing Response Tests on Highly Permeable Aquifers

by Donald W. Prosser[a]

ABSTRACT

Response or "slug" tests to determine the hydraulic conductivity of in situ earth materials are often difficult to perform in situations of very high hydraulic conductivity. In small-diameter standpipes, rapid response to the induced head difference, often in a matter of seconds, is difficult to measure with conventional well sounders. Instantaneous induction of a known head difference is also a major problem when dealing with very fast response times. A method of performing such tests has been developed, utilizing electronic pressure transducers to monitor the response to a pneumatically induced head. Increased air pressure within the standpipe causes displacement of the water column to accommodate the air pressure. Once the aquifer has re-equilibrated in this condition, sudden release of the air pressure constitutes an instantaneously induced head difference. The response measured by the electronic pressure transducer can be recorded digitally or by an analog chart recorder with fast paper-speed. This method has been used to measure basic time lags in the order of several seconds. The use of electronic pressure transducers and pneumatically induced head differences will allow accurate measurements in situations of higher hydraulic conductivity than would be possible using common response testing techniques.

INTRODUCTION

A method of determining the hydraulic conductivity of in situ earth materials through small-diameter standpipes was developed when a situation was encountered in which a number of physical constraints impeded such measurements, particularly in highly permeable materials. Two-inch (nominal) PVC standpipes were installed into reclaimed surface coal mine spoil to collect water samples for chemical analysis (Alberta Environment, 1980). The small inside diameter of the standpipes and the depth of the static water levels precluded the possibility of performing constant discharge pumping tests when the need for hydraulic conductivity data arose.

Response or "slug" tests were also subject to a number of constraints. Foreign waters could not be introduced into the wells since they were being used to sample for chemical quality analysis. Water could be bailed from the standpipes, then poured back to provide the required head difference; however, the depth to the static water level reduced the sharp pulse of water introduced at the top of the standpipe to a film running down the standpipe wall. In zones of high permeability, hence rapid response, such a slug cannot be considered as an instantaneous change in head.

A solid plastic slug was used successfully in several tests, but again, problems were encountered in the fast-responding observation well. The narrow

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Discussion open until May 1, 1982.

annular clearance between the slug and the standpipe restricted water flow between the two, resulting in erroneously low hydraulic conductivity values. A slug of smaller diameter would have solved the problem, but a number of wells did not have sufficient depth from the static water level to the bottom of the pipe to accommodate a slug of appreciable length. A short, slim slug would induce such a small head difference that the resolution of the measurements would suffer.

Aside from the problems of inducing the head difference, there was the problem of measuring the rapidly decaying induced head with an electric gauge tape. Since readings could be taken only every 10 seconds at best, fast-responding piezometers had almost totally recovered before the first measurement could be obtained.

TESTING APPARATUS

Rapidly changing hydraulic heads can be monitored efficiently by electronic pressure transducers. Their use to measure hydraulic head has been an established practice for over a decade (Cooper *et al.*, 1967). There are a number of such devices on the market today which have the range and sensitivity for most hydraulic head-measuring applications. The rate of response far exceeds the requirements (National Semiconductor, 1977). Some are specifically designed for downhole application.

The transducers used in this instance were the National Semiconductor LX series which were familiar and available to the author through their use in a carbonate analysis apparatus (Gold, 1979).

Although the LX series of transducers are less than ideal for downhole application due to their size and shape, a reasonably efficient encapsulation can be achieved by potting the device in flexible silicone cement and enclosing it in a small vented plastic bottle for protection. An airstone, as used to aerate water in hobby aquariums, should be attached to the pressure port of the transducer to prevent entry of anything but water. The device must, of course, be weighted so that it sinks and maintains a constant position within the standpipe.

The signal from the electronic pressure transducer is fed through a simple inverting operational amplifier circuit to provide zero and span adjustments and is recorded on a chart recorder (see Figure 1). An important criterion of the chart recorder is fast chart paper speed. A "Linear" brand model 258, chart recorder with a maximum chart speed of 40 cm/min (15.75 in/min) was utilized in the test described here.

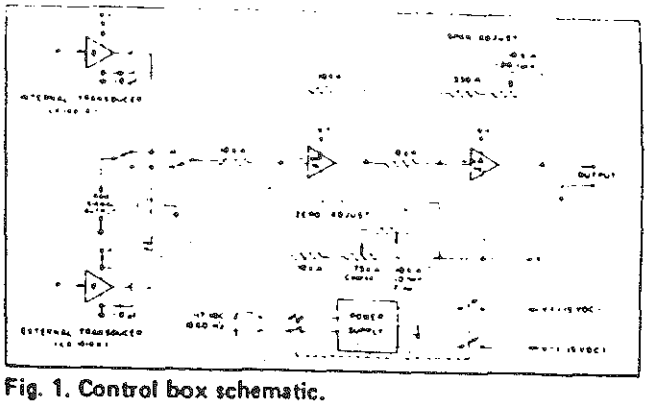

Fig. 1. Control box schematic.

An instantaneous change in hydraulic head was achieved by sealing the top of the standpipe and increasing the pressure in the air column above the water. The water column will be displaced by 10.2 cm/kPa (2.31 ft/psi). The aquifer responds by absorbing the water column displaced from the standpipe by the air pressure and returning to static conditions. Sudden release of the air pressure constitutes an instantaneous change in head.

The air pressure above the water column within the standpipe is monitored by a second electronic pressure transducer (T2) mounted in the control box which contains the zero and span controls and the power supply for the electronics (see Figure 1). It is connected to the well head by $\frac{3}{8}$-inch plastic tubing. A "U" tube is also connected to the well head and is used to field check the calibration of both transducers. For convenience both transducer signals were calibrated in units of head on the chart recorder.

The well head assembly consists of a 2-inch nominal PVC "tee" which can be screwed onto the top of the standpipe (see Figure 2). A 2-inch ball valve is fitted to the "tee" to allow the air pressure to be released quickly. The top of the well head assembly is fitted with a packing gland which allows the downhole transducer cable to be adjusted for depth and provides an airtight seal around the cable. Packing glands such as the "Cajon" brand "Ultra Torr" fittings can be obtained for virtually any size cable, or alternately, the ferrule in a compression fitting can be replaced with several appropriately sized rubber "O" rings.

Air pressure is admitted into the well head assembly through a plastic tubing fitting threaded into a small hole tapped into the "tee." Flexible plastic tubing from the pump or bottled air source to the well head allows monitoring of the air pressure by the second transducer (T2) and the "U" tube.

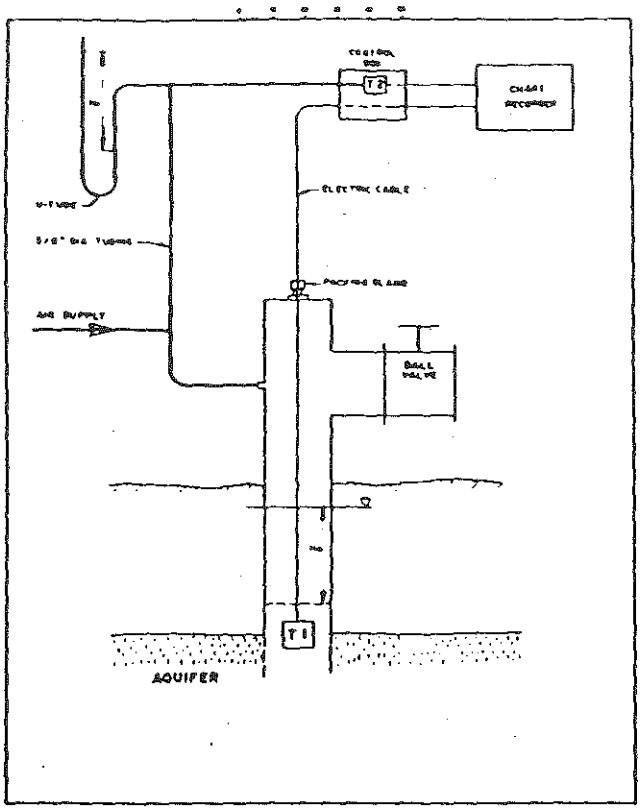

Fig. 2. Schematic of pneumatic/transducer response testing apparatus.

PROCEDURE

Calibration

The well head assembly is screwed onto a threaded fitting on the top of the standpipe with the downhole transducer (T1) hanging above the water column. With the ball valve open, both chart recorder channels are adjusted to zero. All pipes and tubing joints and the packing gland are made secure against air leaks. The ball valve is closed. Pressure in the air column is then increased to a convenient value and both transducer outputs on the chart recorder are calibrated to the "U" tube reading. The maximum allowable pressure during calibration and testing is determined by the range of the transducers, the range of the "U" tube and by the height of the static water column above the openings to the aquifer in the observation well. The water column must not be depressed so far that air can escape into the aquifer. The ball valve is then opened to ensure that both channels return to zero.

Test

When the span of both channels has been calibrated, the packing gland is released and the transducer (T1) is lowered into the water to such a depth that it will remain submerged throughout the test. Figure 3 illustrates the response to each stage of the operating procedure described below.

With the ball valve open and the observation well at its static condition, set both channels of the chart recorder at zero (a); channel one (T1) signifies that the well is at its static condition and channel two (T2) signifies that the air in the standpipe is at atmospheric pressure.

The ball valve is closed and the air pressure above the water column is increased (b-c). The water column will be depressed by the increased air pressure. If the air pressure is increased slowly, little change will be seen in the pressure recorded on the submerged transducer since the aquifer absorbs the displaced water column and remains at its static condition. If the air pressure is increased more rapidly than can be accommodated by the aquifer, an increased pressure will be observed in the submerged transducer but it will return to zero once the airflow stops and the aquifer equilibrates (c-d). Fine control is required on the air supply to make final adjustments to the induced head (H_o) and to compensate for the inevitable slow leaks in the air pipe and tubing joints (d).

Once the submerged transducer (T1) signal shows the aquifer to be at its static condition and the air pressure transducer (T2) is stable and in agreement with the "U" tube, the chart recorder is switched to the appropriate fast speed and the ball valve is opened (e).

An immediate decrease in pressure corresponding to the height of the displaced water column will be recorded on both channels as the air column returns to atmospheric pressure (e-f). The aquifer responds as if it suddenly had a column of water removed from the standpipe which corresponds in height to the air pressure released. The chart for the submerged transducer (T1) will drop below zero by an amount equal to the head shown on the air column transducer (T2) and the "U" tube before the valve was opened.

The submerged transducer will then record the recovery of the water level in the standpipe from the induced head to the prepressured static water level (f-g). In situations of very high permeability, the response of the chart recorder and the inertia of the air mass may prevent the submerged transducer from registering the total induced head (H_o) before the rapidly recovering water level catches up to it. This effect can be seen at point (f) of the T1 trace.

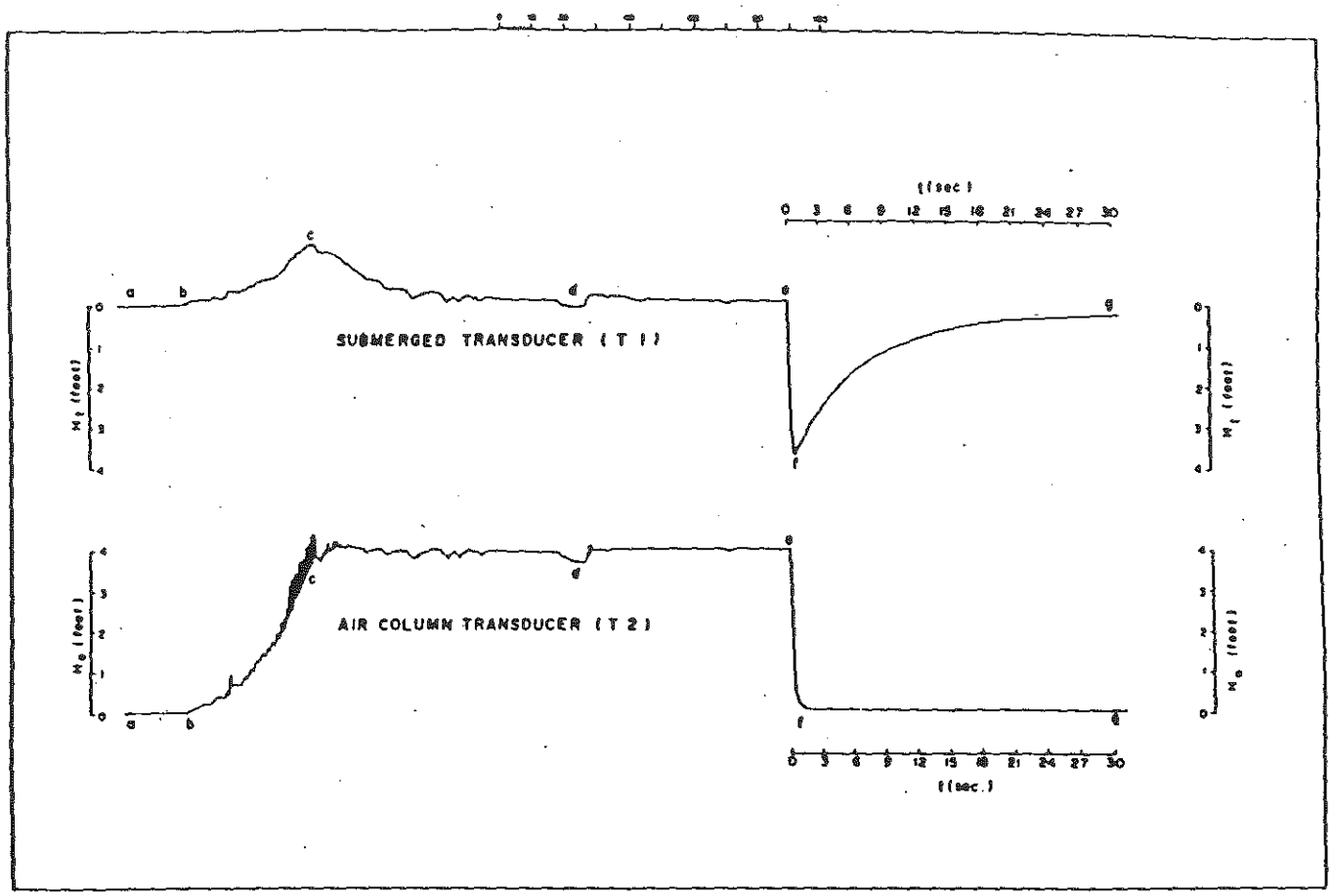

Fig. 3. Response test record.

DISCUSSION OF RESULTS

Figure 4 shows the Hvorslev plot of slug tests performed on the same observation well by three different methods (Hvorslev, 1951):

Plot #1 – Head difference induced by lowering a sinking solid slug into the water. Water level measurements made with electric well sounder.

Plots #2-4 – Head difference induced by pouring water into the standpipe. Water level measured with electric well sounder.

Plots #5-9 – Head difference pneumatically induced. Water levels continually measured with electronic pressure transducer and chart recorder.

Trace #7 on Figure 4 is the Hvorslev plot of the (f-g) segment of the chart recorder record illustrated in Figure 3. It can be seen from the traces that the observation well responded too rapidly to be measured effectively with an electric well sounder. More important, the first two testing methods indicate a lower hydraulic conductivity by their slower response. The solid plastic slug had only 0.12 in. (3.0 mm) clearance in the standpipe,

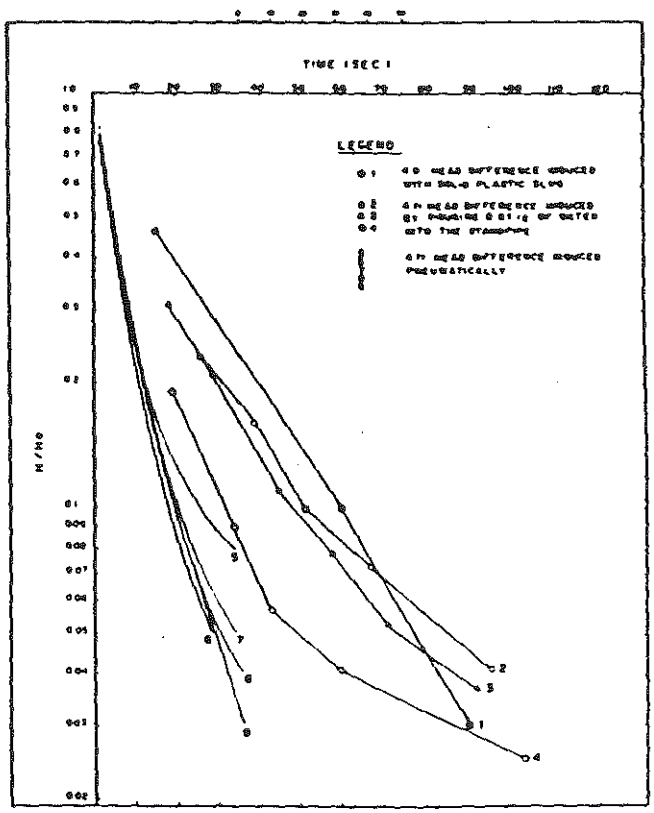

Fig. 4. Comparison of response testing method.

Table 1. Comparison of the Hydraulic Conductivity Values Obtained by Three Methods of Slug Testing

Test Number	*Slug Type*	*Basic Lag Time (seconds)*	*Hydraulic Conductivity (cm/sec)*
1	solid	26	5.3×10^{-3}
2	water	18	7.6×10^{-3}
3	water	15	9.1×10^{-3}
4	water	11.5	1.2×10^{-2}
5	pneumatic	6.8	2.0×10^{-2}
6	pneumatic	6.5	2.1×10^{-2}
7	pneumatic	7.5	1.8×10^{-2}
8	pneumatic	7.2	1.9×10^{-2}
9	pneumatic	7.4	1.8×10^{-2}

which impeded sinking of the slug and flow of water through the annulus during recovery.

Introduction of a slug of water into the standpipe did not induce the full head expected from the volume of water added because the well was recovering while a portion of the slug was still running down the standpipe wall. In Figure 4, delayed arrival of this water while recovery measurements were being taken gives the appearance of slower response.

Table 1 shows the basic time lags (Hvorslev, 1951) and hydraulic conductivity values derived from the plots illustrated in Figure 4. Response to the pneumatic-pressure transducer method of slug testing was approximately two to three times faster than the other methods which cannot accommodate rapid response. Basic time lags in the order of 1.6 seconds, corresponding to an hydraulic conductivity value of 1×10^{-1} cm/sec have been measured using the pneumatic-transducer method; however, other factors such as inertia of the air and water columns and well losses at the screen impose a practical upper limit on the system. These limitations can be corrected to some extent by shortening the height of the induced head difference. Digital recording of the transducer output signal will overcome the problem of chart speed on an analog recorder.

CONCLUSION

In studies of contaminant movement, mine pit dewatering, and ground-water flow systems in general, the zones of highest hydraulic conductivity are the most important. The rate and amount of flow can be calculated only to the precision of the measured hydraulic parameters. It is therefore particularly important to compile accurate data on the aquifers with very high hydraulic conductivity. The use of electronic pressure transducers and pneumatically induced head differences will allow accurate measurements in situations of higher hydraulic conductivity than would be possible using common response testing techniques.

REFERENCES CITED

Alberta Environment. 1980. Hydrogeologic effects of coal strip mining at Whitewood Mine, Alberta. Alberta Environment, Earth Sciences & Licensing Division.

Cooper, H. H., J. D. Bredehoeft and I. S. Papadopulos. 1967. Response of a finite diameter well to an instantaneous charge of water. Water Resources Research. v. 3, no. 1.

Gold, C. E. 1979. Stratigraphy of surficial deposits in parts of east-central Alberta. Groundwater Branch Report, Alberta Environment.

Hvorslev, M. J. 1951. Time lag and soil permeability in groundwater observations. U.S. Army Corps of Engineers. Waterways Experimental Station, Bulletin No. 36.

National Semiconductor. 1977. Pressure transducer handbook. National Semiconductor Corporation.

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APPENDIX H

APPENDIX H

IRM REPORT

REPORT

INTERIM REMEDIAL MEASURE IMPLEMENTATION
STANLEY TOOLS
FOWLERVILLE, MICHIGAN

Prepared for:
THE STANLEY WORKS

JOB NO.: 03163-055-148
JUNE 6, 1995

DAMES & MOORE

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1.0 INTRODUCTION

This report outlines the activities that were undertaken to implement an Interim Remedial Measure (IRM) for the Stanley Tools site located in Fowlerville, Michigan. An IRM Work Plan was transmitted to the U.S. EPA, Region V, on November 23, 1993, and was approved on March 23, 1994. The IRM Work Plan called for the excavation and off-site disposal of sludge material in Units F, G, H, and I. Removal of sludge discovered while performing borings as part of the site investigation was also added to the scope of work. The IRM was performed in conjunction with the ongoing RCRA Facility Investigation (RFI) being conducted by The Stanley Works (Stanley) under a Consent Order with Region V of the United States Environmental Protection Agency (EPA).

IRM work was completed on April 26, 1995, in accordance with the approved IRM Work Plan bid under a Request for Proposals (RFP) dated July 5, 1994 and an addendum to the RFP dated July 15, 1994.

2.0 BACKGROUND

2.1 SITE DESCRIPTION

The Stanley Tools facility is located at 425 Frank Street on the southwestern side of Fowlerville, Michigan (Figure 1). On the west, the site is bordered by the Red Cedar River. The site comprises an area of approximately 8 acres and currently remains unoccupied. The manufacturing buildings were leveled and the debris removed in 1993. The site has a topographic relief of 7 feet, ranging in elevation from approximately 881 feet near the Red Cedar River to approximately 888 feet near Frank Street (Figure 2). Surface water drains either directly toward the Red Cedar River, or toward one of two drainage ditches located north and south of the former building. The majority of the site is situated within the 100-year flood plain.

2.2 DESCRIPTION OF SWMUs F, G, H AND I

The physical characteristics and historical development of the Solid Waste Management Units (SWMUs) involved in the IRM are discussed individually in this section.

2.2.1 Unit F - Untreated Sludge Disposal Area

As shown on Figure 2, Unit F is adjacent to the river and is located to the west of the former RCRA surface impoundment (Unit A). Unit F received untreated sludge during the construction of the impoundment system in 1969 and 1970. Materials excavated during lagoon construction were deposited on a strip of land parallel to the river which is now referred to as Unit F. The excavated materials included the untreated electroplating sludges that had been removed from a settling pond (Unit B) and spread on the ground near Units A, D, and E. In addition, sludges were bulldozed along the riverbank from the settling pond (Unit B) to Unit F.

Prior to implementation of the IRM, Unit F was sparsely vegetated with light moss and grass over a dry, friable sludge (Appendix A - Photograph 1).

2.2.2 Unit G - Chemfixed Sludge Disposal Area

Unit G is located approximately 140 feet north of the former RCRA surface impoundment (Unit A). In 1971, Unit G was constructed to receive chemfixed sludges from Unit A. Originally, Unit G was approximately 150 feet by 115 feet and was excavated to a 3-foot depth. The bottom was lined with 5- to 6-mil plastic. A sump was reportedly constructed to collect and monitor leachate above the liner. Sludge from the surface impoundment system was reportedly pumped into the chemfix truck, where it was mixed with a fixing agent, then transferred to Unit G.

The chemfix process was used on sludge removed from the pond system again in 1972, but was subsequently discontinued because the process did not perform as expected and because it was more cost effective to send the sludge off-site for treatment and disposal. Some sludge was reportedly removed from Unit G in 1972. However, a significant portion remained.

Prior to implementation of the IRM work, the surface of Unit G was covered with vegetation, with the surficial sludge typically dry and friable.

2.2.3 Unit H - Sludge Spill

Unit H is located between the former surface impoundment (Unit A) and Unit G. During the transfer of sludge from the impoundment to the truck used in the chemfix process, a small volume of sludge was apparently spilled, creating Unit H.

Prior to IRM work, Unit H was vegetated with a light grass cover along the edges and the sludge was typically dry and friable.

2.2.4 Unit I

Unit I is located in an east-west drainage ditch that drains to the Red Cedar River, separating the plant site from the railroad right-of-way. The sludge in the ditch accumulated from previously received permitted discharges from the outfall that drained the original sludge settling pond (Unit B), until that pond closed in 1970.

Prior to IRM work, Unit I was vegetated with light grass and brush.

2.2.5 GB-44

While performing borings in conjunction with the Phase II RFI, sludge was encountered at a depth of 4 to 6 feet at boring location GB-44, located approximately 50 feet northeast of Unit F and 40 feet west of MW-A1 (Figure 3). Excavation and offsite disposal of the sludge was included in the scope of the IRM. The sludge was to be removed and the soil (above the sludge) stockpiled until such time as the excavation was complete and the soil could be used as backfill.

3.0 IRM OBJECTIVE AND PERFORMANCE STANDARD

The objective of the IRM work was to remove sludges from the subject site. The removal of sludges was not intended to constitute final remediation of the site. Rather, the work performed was intended to mitigate the potential for releases to the environment from the sludges through excavation, offsite treatment, and disposal. Final site remediation will be determined following the Corrective Measures Study.

The performance standard for the proposed IRM was a qualitative determination in which sludge was selected for excavation and removal based upon visual observations.

The sludge was an easily identifiable material because of its color characteristics (predominantly grayish-white and green). Because the project was an interim measure, it was limited to removal of sludge only and did not include removal of soil mixed with sludge.

4.0 PREPARATION

The following sections of this report summarize the field activities which took place prior to the commencement of work at the site.

4.1 CONTRACTOR SELECTION

In order to implement the approved IRM Work Plan, a RFP was prepared by Dames & Moore and issued on July 5, 1994. A pre-bid meeting was held at the site on July 12, 1994 and an addendum to the RFP was issued July 15, 1994. Bids were received from three contractors. After evaluating each of the bids, the contract was awarded to O'Brien & Gere Technical Services, Inc. (OBG Tech) of Plainville, Connecticut. Oversight and post-excavation sampling was performed by Dames & Moore.

4.2 PRE-CONSTRUCTION MEETING

A pre-construction meeting was held at the site on September 26, 1994, and was attended by representatives of Stanley, Dames & Moore, Johnson Controls, and OBG Tech. The various tasks of the IRM were discussed and any clarification as to the intent of the IRM or scope of work to be performed by OBG Tech were resolved.

4.3 SUBMITTALS

The contractor submitted the following documents prior to proceeding with construction:

- Health and Safety Plan
- Stormwater Control Plan
- Site Security Plan
- Dust Control Plan
- Certifications
- Construction Schedule

Dames & Moore received a Health and Safety Plan, Stormwater Control Plan, Site Security Plan and Dust Control Plan from OBG Tech on October 17, 1994. Each plan was reviewed for conformity with the project scope of work and RFP and found to be sufficient. Certifications of health and safety training were provided by the contractor upon arrival at the site. A construction schedule was provided by the contractor showing completion of the project by the final week of November.

4.4 PERMITTING

The Livingston County Drainage Commission (LCDC) requires that a permit be obtained prior to any excavation within 500 feet of a water body. The contractor submitted the application for permit and the LCDC granted verbal permission to begin excavation on November 3, 1994. A written permit was received on November 4, 1994, and is presented as Appendix B.

5.0 FIELD PROCEDURES

The following sections summarize the field activities to complete the work associated with the IRM Work Plan. The majority of the work was completed by December 28, 1994. Work was suspended due to weather conditions at that time. The work completed in the Spring of 1995 is described in Section 6.0.

5.1 MOBILIZATION

Personnel from the Plainville, Connecticut office of OBG Tech began work at the site on October 26, 1994. Mark Sydorowych, supervisor, and Keith Sheldon, equipment operator, were on site throughout the work. OBG Tech also used the services of Glenn Price, a temporary laborer from Onsite Environmental, to aid in clearing trees surrounding the SWMUs for approximately one week. Personnel from OBG Tech's Novi, Michigan office were occasionally used throughout the project to assist as laborers.

The equipment used throughout the portions of the project completed in the fall of 1994 was rented from various regional equipment rental companies. A Komatsu PC300 excavator and Komatsu D37E dozer were on site at the start of the project. The PC300 remained on site until being replaced by a long reach PC200 on November 14, 1994. After

use, the contaminated equipment underwent decontamination procedures as described in Section 5.8 of this report.

5.2 SITE PREPARATION

Site preparation for the IRM work consisted of removal of trees and brush located in and around the SWMUs, construction and stabilization of roadway necessary for the hauling of waste from the SWMUs, and placement of erosion control measures.

The removal of trees and brush in Units F, G, and H was accomplished using chain saws. The trees were cut close to the ground and effort was made to fell the trees outside of the unit. Any portion of a tree which contacted sludge was left in the SWMU to be disposed along with the waste. Tree removal along the northeast and east side of Unit F was performed to facilitate access to the unit. Tree removal along the north, west, and east sides of Unit G as well as on the surface of the unit allowed for access to the sludges without contacting trees with the sludge. Tree removal in Unit H consisted of cutting one tree within the bounds of the unit. After the trees were felled they were stockpiled at various locations around the site until a chipper could be brought on site. Logs larger than twelve inches in diameter were left on-site.

The construction of roadway was necessary in Unit F and Unit G to facilitate access for trucks which hauled the sludge from these units (see Figure 3). The roadway was constructed of geotextile overlaid with crushed stone. Unit F construction consisted of 145 feet of roadway extending from the southeast end of the unit to approximately the existing wastewater treatment plant building. Unit G construction consisted of 165 feet of roadway extending from monitoring well MW-G1 northwest onto Copeland Rental property.

Erosion control measures were erected in each unit prior to beginning excavation. The contractor placed silt fence in the areas of anticipated runoff from each SWMU. A straw bale ditch check was also placed in the ditch along the south side of the property at the downstream end of Unit I.

5.3 SLUDGE TESTING AND RESULTS

Samples of the waste were taken from each SWMU on November 1, 1994, to obtain disposal approval. The samples from Units F and H were composited into one

sample as were the samples from Units G and I. These samples were analyzed by the Envotech Management Services, Inc. Analytical Laboratory to determine whether treatment would be required to obtain disposal approval. Results of the analysis are presented in Appendix C. Disposal approval for sludges from Units F and H was received on November 10, 1994. The results from the Unit I and G composite indicated treatment was also required, which was not expected based on the previous RFI sampling results. Additional samples of Unit G and Unit I sludges were taken on November 17, 1994, prior to excavation. Analysis of these samples (Appendix C) also indicated that treatment would be required for both Units I and G.

Due to the additional volume of sludge requiring treatment (approximately twice the originally anticipated volume) the construction schedule was extended to accommodate the treatment capacity of Michigan Disposal.

5.4 EXCAVATION

The following sections describe the excavation efforts and any difficulties encountered in excavation of sludges from each of the SWMUs. The visual standard discussed in section 3.0 of this report was used to select sludge for removal.

5.4.1 Unit F and GB-44 Excavation

The contractor's initial plan for excavation of the sludge was to begin in the northwest corner of the unit and move the sludge toward the southeast end of the unit where it could be loaded for disposal.

Due to the difficulties in accessing the northwest corner of the pond from outside the unit the contractor elected to walk the excavator onto the surface of the unit and perform excavation with the PC300 from on top of the sludge layer. During removal in the northwest corner of the unit, the sludge became unstable and one of the excavator tracks became buried in the sludge. In order to remove the excavator a second machine (Komatsu PC220 excavator) was brought on site the following day. The second excavator was walked onto the stable portion of the pond. The sludge and approximately 31 cubic yards of soil behind the PC300's buried track was removed so the PC300 could be extracted. The hole which was formed by the PC300 and the activities necessary to remove the machine became filled with water and sludge immediately after the machine was removed.

After removal of the PC300 excavator, the PC220 was decontaminated and removed from the site.

The contractor continued excavation in the northwest end of the unit, away from the area where the excavator was stuck, using the PC300 excavator and bailing the sludge toward the southeast end of the unit as originally planned. Excavation in the northwest portion of the unit revealed that the sludge extended below the water table. The material in this area was stable and therefore delineation between clean areas and areas requiring further excavation was easily accomplished. While water seeped into the excavated areas, the rate of flow was slow enough so that excavation was not affected and substantial standing water in the excavation was not present until after the sludge removal was completed. As excavation of the sludge neared the area where the PC300 excavator had been stuck, it became evident that the remaining sludge had been mixed with ground water and soil during machine removal efforts and was unstable and would slump into the areas of "clean" excavation. To prevent additional mixing of sludge and clean soils, the contractor constructed a dike using soils from the surrounding embankments, between the unstable sludge and the areas from which sludge had been removed.

As the excavation proceeded to the southeast a decrease in the depth of the sludge was observed. The depth of sludge observed in the northwest corner of the pond, along the western embankment, was between 4 and 6 feet. Fifteen to 20 feet east of the western embankment the sludge depth was approximately 2 feet deep.

After completing excavation of the northern third of the unit the contractor obtained a Komatsu PC200 excavator with a long reach boom allowing the machine a radius of excavation of approximately 55 feet. With the long reach excavator the contractor was able to excavate the remainder of the sludges without entering Unit F. The PC300 excavator was decontaminated and removed from the site.

The contractor continued to excavate Unit F sludges in a southeasterly direction, bailing the sludge to a stockpile in the southeastern corner of the pond. After excavation of the northwestern half of the pond an area of concrete rubble and sand extending from the northeastern embankment into the unit was encountered. A thin stripe of sludge (approximately 1-foot in thickness) was observed under the fill. This fill extended approximately 50 feet southeast along the face of the pond embankment and approximately 10 feet northeast into the embankment. Whenever possible, the fill was removed and

stockpiled without disturbing the sludge to reduce the volume of material requiring landfill disposal.

Excavation and disposal of sludge materials continued in a southeasterly direction until the removal objectives, as outlined in the IRM Work Plan, were met. The bottom of the pond contained standing water and the final elevation of the pond bottom was approximately 6 to 12 inches below the water table.

The area where the PC300 was removed in the northwest corner of the Unit was the only issue involved with Unit F work which remained unresolved when work was suspended for the winter. Prior to completion of work in the winter, the contractor sampled and analyzed the water standing in the hole (see Appendix F). Sludge removal activities were resumed in the spring of 1995 as discussed in Section 6.1 of this report.

Boring GB-44

The contractor began excavation in GB-44 by removing an approximately 10-foot by 10-foot square area of soil to a depth of 4 feet and stockpiling the soil. The contractor then continued excavating downward and encountered a layer of sludge. The sludge containing material was removed and stockpiled with Unit F sludges for disposal. After removal of sludges in the 10-foot by 10-foot area, the lateral extent of the sludge contamination had not been discovered.

In order to evaluate the extent of the sludge layer surrounding GB-44 the contractor excavated trenches to the north and east. These trenches revealed the well defined sludge layer appeared to end approximately 10 to 12 feet beyond the initial excavation. Four pits were excavated in an effort to determine the southern and western extent of sludge contamination. The pit west of GB-44 was the only pit in which a clearly defined sludge layer was observed.

After the extents of sludge layer were evaluated, the sludge free overburden soils were removed, and stockpiled, and the sludge was excavated. The contractor then backfilled the excavation with the overburden soils.

Unit F and GB-44 work was completed to the standards set forth in the IRM Work Plan (Appendix A - Photograph 2), with the exception of the sludge remaining in the hole

in which the excavator was stuck, as discussed above. The estimated area of actual excavation is 11,600 square feet for Unit F and 2,000 square feet for the GB-44 area. As tabulated in Table 1, the total weight of sludge removed from Unit F and GB-44 was approximately 1,707 tons.

5.4.2 Unit G Excavation

The contractor began excavation of Unit G in the northeast corner, south of the peninsula which extends from the northeast corner of the unit to the center of the unit. Excavation continued in a clockwise manner around the unit until reaching the northwest corner where the sludge was staged for loading onto trucks. The contractor continued excavation in the northeast corner, north of the peninsula and advanced in a counter-clockwise direction. The long reach excavator was used in Unit G and did not enter the unit at any time.

The depth of sludges removed from the unit varied. Sludges in the southeastern corner of the unit were approximately 2 to 3 inches in thickness. Sludge in the western and northeastern portion of the pond were approximately 6 inches in thickness. The southwest and northwest corners of the unit contained sludges approximately two feet in thickness. The edge of the peninsula was surrounded by a layer of 2 to 3 feet thick sludge which varied from 2 to 5 feet in width. A layer of sand overlaying a thin plastic liner was encountered below the sludge layer and was left in place.

A limited amount of sludge outside of the dikes which comprise Unit G was discovered while the contractor was removing trees from the unit. The sludge was located at the approximate midpoint of the western dike of Unit G and extended westward to the fence. The deposit varied from 0 to 2 feet thick in depth and averaged approximately 15 feet in width. The sludge from this area was removed along with Unit G sludges.

Standing water was observed on the surface of Unit G and in the excavated area outside of the unit. The water was observed to seep slowly into the areas after completion of excavation. The water in Unit G was at an elevation above the water in the excavated area outside the unit (approximately 1 to 2 feet) and is therefore believed to be perched water contained by the plastic liner in the unit.

Unit G work was completed to the standards set forth in the IRM Work Plan (Appendix A - Photograph 3). The estimated area of actual excavation is 15,200 square feet within the unit and 1,100 square feet for excavation outside the unit. As tabulated in Table 2, the total weight of sludge removed from Unit G was approximately 772 tons.

5.4.3 Unit H Excavation

In order to perform the excavation in Unit H, the contractor removed approximately 60 feet of fencing directly south of the unit. Once the fence was removed, the contractor was able to excavate the sludges from a position on the top of the north dike of Unit A using the long reach excavator. The excavated material was then placed on sheets of polyethylene located on the northeast corner of the dike surrounding Unit A. The contractor then moved the pile onto sheets of polyethylene on the east side of the fence which bounds the east side of Unit A. Trucks were loaded directly from this point.

Unit H excavation was completed to the standards set forth in the IRM Work Plan (Appendix A - Photograph 4). The depth of sludge removed from Unit H averaged 6 to 8 inches. The total area of sludge removal was approximately 1,400 square feet, and the total weight of material removed from Unit H as tabulated in Table 3, was approximately 63 tons.

5.4.4 Unit I Excavation

Due to the proximity of the railroad tracks to the work performed, a CSX representative was on site throughout excavation in Unit I. Overhead power and telephone lines, coupled with a security fence along the south side of the property provided limited safe access for the excavator boom, necessitating the temporary disconnection of the telephone line to the site. With the telephone line removed, safe access to the sludge was possible.

The contractor excavated the sludges in Unit I using the long reach excavator and stockpiling the materials on polyethylene on Stanley Tool property. The stockpile was then loaded onto trucks for disposal.

Unit I excavation was completed to the standards set forth in the IRM Work Plan (Appendix A - Photograph 5). The area of sludge removed was approximately 900 square

feet. The average depth of sludge was estimated to be 1.5 to 2 feet. As tabulated in Table 4, the total weight of sludge removed from Unit I was approximately 60 tons.

5.5 TRANSPORTATION AND DISPOSAL

All sludges removed from the site were treated and disposed at Michigan Disposal in Belleville, Michigan. The disposal facility's inability to accept the volume of waste which the contractor had stockpiled for disposal resulted in delays in removal of the wastes from the site. Michigan Disposal maintains a limited number of 180 cubic yard treatment vessels. The volume of waste which could be disposed by the contractor was dependent upon the number of treatment vessels available on any given day. On several occasions the landfill was unable to accept stockpiled wastes due to the limited availability of treatment vessel space, resulting in an overall delay in project completion.

M.L. Chartier, a licensed hazardous waste hauler provided trucking services. All trailers had a plastic liner in place before loading and were tarped prior to leaving the site. Part way through the project the contractor elected to use Buffalo Fuel Corporation to provide trucking services. Waste manifests are presented as Appendix D of this report.

5.6 POST-EXCAVATION SAMPLING

Dames & Moore conducted post-excavation soil sampling in Units F, G, H, and I. Soil samples were taken from three points in both Units H and I. Soil sample locations in Units F and G were established to maintain the site wide 45 foot sampling grid. The sample locations are shown on Figure 3. A hand auger was used to collect soil samples at approximate depths of 1 and 2 feet for Units H and I. A hand auger was also used to collect surficial soil samples (0 to 6 inches) in Units F and G. The auger was decontaminated between samples. The decontamination procedure consisted of scrubbing the auger with brushes using distilled water with detergent (TSP), rinsing with distilled water, spraying with 2 percent nitric acid and then rinsing with distilled water.

After collection, each sample was placed in laboratory supplied containers and shipped to Quanterra Inc. in Arvada, Colorado. Each sample was analyzed for total metals, PCBs, total petroleum hydrocarbons, cyanide, VOCs, and SVOCs. A summary of the analyses are presented in Tables 5 through 8.

Darrell Hughes Associates conducted a survey of the post-excavation terrain and located the sample points. At the time the survey was performed the excavation was completed and Unit I had been backfilled to maintain drainage in the channel. The survey information is presented as on Figure 3.

5.7 SITE RESTORATION

Restoration of the site after fall activities were minimal due to the time of year in which work was completed. The trees which had been cleared for access to the SWMUs were chipped and spread on portions of the site outside the units which had been disturbed. Trees over 12 inches in diameter could not be accepted by the chipping machine and were left on-site. All erosion control measures were left in place. No seeding or mulching took place due to the winter season.

Fill was placed in Unit I to achieve a uniform flowline in the ditch between the site and the railroad. Prior to bringing fill on-site, the contractor obtained a sample from the borrow source and analyzed the sample for Michigan RCRA metals and VOCs (Appendix E). The fill was accepted and approximately 40 cubic yards of fill were placed in the Unit I excavation. The material was compacted using the bucket of the excavator, and a straw bale ditch check was placed at the downstream end of the excavation.

Completion of restoration activities took place in the spring of 1995 and are discussed in Section 6.2 of this report.

5.8 DECONTAMINATION PROCEDURES

All equipment which contacted sludge was decontaminated prior to leaving the site. A decontamination pad was constructed to the north of Unit F, as shown on Figure 3. The pad consisted of an excavation approximately 20 feet by 15 feet and 8 inches deep and lined with plastic. Two 4 feet by 8 feet sheets of plywood were placed on top of the plastic liner to prevent tearing when contacted by the excavator tracks.

The PC300 and PC220 excavators both required decontamination of the entire machine. The PC200 long reach only contacted the sludge with the bucket, and therefore only required that the bucket be decontaminated. When the PC200 excavator was moved

between Units F and G, the bucket was scraped with a shovel to remove all loose sludge. The dozer did not contact sludge and, therefore, did not require decontamination.

The PC300 and PC200 decontamination consisted of scraping as much sludge from the machines as possible using shovels. The machines were then moved to the decontamination pad where they were power washed and rinsed.

6.0 IRM WORK COMPLETION - SPRING 1995

IRM work was suspended at the end of December, 1994 due to inclement weather. When work resumed in the spring of 1995, resolution of two issues was required for completion of the IRM scope of work. OBG Tech elected to retain a sub-contractor, Young's Environmental Cleanup Inc. (Young's) of Flint, Michigan to assist in completion of the work. The resolution of the issues is discussed below.

6.1 REMOVAL OF REMAINING UNIT F SLUDGE

As discussed in Section 5.4.1 of this report, during IRM work completed in the fall of 1994, an excavator became stuck in the northwest corner of Unit F. On April 20, 1995 the contractor used a 5,000 gallon tanker truck and a 10,000 gallon roll-off storage tank to remove standing water from the hole where the excavator had been stuck. The water was removed in order to allow a visual inspection of the hole. The water was disposed at Dynecol, Inc. of Detroit, Michigan. A total of approximately 6,125 gallons of water were disposed. The disposal manifests for this water are included in Appendix D.

Immediately after the water was removed from the hole, the contractor excavated approximately 15 to 20 cubic yards of sludge from the hole and placed it in a roll-off box. This material was disposed at Michigan Disposal, Inc. on April 24, 1995. The disposal manifest for this sludge is included in Appendix D.

After excavation, the excavator was washed and rinsed using a power washer. The water from washing operations was disposed with the standing water removed from the hole.

With the removal of this sludge, Unit F sludge removal was completed to the standards set forth in the IRM Work Plan.

6.2 DISPOSAL OF METAL BOX

A second outstanding issue from the IRM work conducted in the fall was removal of a metal box which was originally located near the northwest portion of Unit F. During work completed in the fall, the box was determined to be free of sludge. It was removed from the Unit F area, cut into manageable size pieces with a cutting torch and left on site.

Young's Environmental removed the box from the site for sale to a scrap dealer on April 17, 1995.

6.3 RESTORATION ACTIVITIES

In order to obtain the release of the LCDC bond discussed in Section 4.4, stabilization of disturbed soils outside the limits of the Units was required. Restoration activities were performed on April 25 and April 26, 1995. The following sections describe the restoration activities which took place in each Unit.

6.3.1 Unit F

Restoration of Unit F consisted of grading, seeding and mulching the area northeast of the Unit which was disturbed during the excavation of sludges from the Unit and GB-44. No restoration of the interior of the Unit or of the excavation surrounding GB-44 was performed.

6.3.2 Unit G

Restoration activities in Unit G consisted of backfilling, seeding and mulching the excavation west of the Unit. The fill material used was from the same borrow source as was used in the fall of 1994. The analytical parameters for the fill are described in Section 5.7. No restoration of the interior of the Unit was performed.

6.3.3 Unit H

Restoration of Unit H consisted of backfilling, seeding and mulching the excavated area and repairing the fencing which was removed to facilitate excavation.

6.3.4 Unit I

Partial restoration of Unit I was completed during the IRM work which took place in the fall of 1994 (Section 5.7). At that time the Unit was backfilled to meet the existing ditch grade. Seeding and mulching was performed in April, 1995.

7.0 CONCLUSION

The IRM work was completed in accordance with the IRM Work Plan dated November 23, 1993, the IRM RFP dated July 5, 1994 and Addendum to the RFP dated July 15, 1994.

TABLE 1

SUMMARY OF DISPOSAL MANIFESTS - UNIT F

STANLEY TOOLS - FOWLERVILLE, MICHIGAN

Date	Manifest Number	Weight (lbs)	Weight (tons)
11/10/94	3723602	47,120	23.56
11/10/94	3723604	52,100	26.05
11/10/94	3723605	87,640	43.82
11/14/94	3723607	47,760	23.88
11/14/94	3723608	46,940	23.47
11/14/94	3723609	57,460	28.73
11/14/94	3723610	61,360	30.68
11/14/94	3723611	57,580	28.79
11/14/94	3723612	41,000	20.50
11/16/94	3723613	56,720	28.36
11/16/94	3723614	46,640	23.32
11/16/94	3723615	51,820	25.91
11/16/94	3723616	55,680	27.84
11/16/94	3723617	42,320	21.16
11/16/94	3723618	55,120	27.56
11/17/94	3723619	50,040	25.02
11/17/94	3723620	62,660	31.33
11/17/94	3723621	61,720	30.86
11/17/94	3723622	45,680	22.84
11/17/94	3723623	51,580	25.79
11/17/94	3723624	54,800	27.40
11/17/94	3723625	52,940	26.47
11/21/94	3723629	61,820	30.91
11/21/94	3723630	58,620	29.31
11/21/94	3723665	49,340	24.67
11/21/94	3723666	64,880	32.44
11/21/94	3723667	60,800	30.40
11/21/94	3723668	55,980	27.99
11/21/94	3723669	50,960	25.48
11/21/94	3723670	60,000	30.00
12/13/94	3457069	41,720	20.86
12/13/94	3457070	29,830	14.92
12/13/94	3457071	39,620	19.81
12/14/94	3457080	42,160	21.08
12/14/94	3457081	48,260	24.13
12/14/94	3457082	37,580	18.79
12/15/94	4103815	33,360	16.68
12/15/94	4103816	39,220	19.61
12/15/94	4103818	29,020	14.51

TABLE 1 (Continued)

Date	Manifest Number	Weight (lbs)	Weight (tons)
12/15/94	4103819	42,260	21.13
12/19/94	3457064	28,880	14.44
12/19/94	4103809	42,320	21.16
12/19/94	4103810	44,340	22.17
12/19/94	4103812	38,200	19.10
12/19/94	4103813	43,840	21.92
12/19/94	4103814	34,560	17.28
12/19/94	4103817	41,120	20.56
12/20/94	3457092	44,260	22.13
12/20/94	3457097	40,540	20.27
12/20/94	3457098	31,620	15.81
12/20/94	3457099	41,260	20.63
12/20/94	4103803	44,260	22.13
12/20/94	4103808	33,340	16.67
12/27/94	3457089	56,100	28.05
12/27/94	3457090	37,720	18.86
12/27/94	3457094	50,180	25.09
12/27/94	3457095	41,100	20.55
12/27/94	3457096	44,960	22.48
12/27/94	3723689	31,060	15.53
12/27/94	3723693	29,360	14.68
12/27/94	4103804	41,580	20.79
12/27/94	4103826	42,560	21.28
12/27/94	4103827	37,080	18.54
12/27/94	4103828	34,760	17.38
12/27/94	4103829	38,980	19.49
12/28/94	4103824	36,680	18.34
12/28/94	4103825	47,340	23.67
12/28/94	4103831	37,800	18.90
12/28/94	4103832	30,180	15.09
12/28/94	4103833	42,600	21.30
12/28/94	4103834	44,620	22.31
12/28/94	4103835	31,140	15.57
12/28/94	4103836	32,900	16.45
12/28/94	4103837	21,400	10.70
12/28/94	4103838	26,500	13.25
4/24/95	3450721	36,600	18.30
		Total	1,706.92

TABLE 2

SUMMARY OF DISPOSAL MANIFESTS - UNIT G

STANLEY TOOLS - FOWLERVILLE, MICHIGAN

Date	Manifest Number	Weight (lbs)	Weight (tons)
12/1/94	3723673	37,600	18.80
12/1/94	3723674	39,420	19.71
12/2/94	3723676	38,120	19.06
12/2/94	3723677	47,040	23.52
12/2/94	3723678	35,160	17.58
12/2/94	3723680	35,660	17.83
12/2/94	3723681	44,360	22.18
12/2/94	3723682	36,180	18.09
12/2/94	3723685	44,820	22.41
12/2/94	3723687	41,220	20.61
12/2/94	3723688	42,900	21.45
12/2/94	3723690	39,780	19.89
12/6/94	3457050	40,240	20.12
12/6/94	3457051	36,480	18.24
12/6/94	3723692	37,640	18.82
12/6/94	3723696	40,620	20.31
12/6/94	3723697	34,720	17.36
12/6/94	3723699	43,500	21.75
12/7/94	3457052	35,000	17.50
12/7/94	3457053	43,100	21.55
12/7/94	3457056	50,700	25.35
12/7/94	3457057	34,800	17.40
12/7/94	3457059	53,240	26.62
12/7/94	3723683	45,480	22.74
12/8/94	3457060	39,020	19.51
12/8/94	3457061	48,080	24.04
12/8/94	3457062	50,340	25.17
12/8/94	3457063	47,760	23.88
12/9/94	3457075	47,220	23.61
12/9/94	3457076	51,760	25.88
12/9/94	3457077	49,100	24.55
12/9/94	3457078	37,320	18.66
12/13/94	3457055	48,620	24.31
12/13/94	3457065	34,680	17.34
12/13/94	3457066	48,480	24.24
12/13/94	3457068	64,100	32.05
		Total	772.13

TABLE 3

SUMMARY OF DISPOSAL MANIFESTS - UNIT H

STANLEY TOOLS - FOWLERVILLE, MICHIGAN

Date	Manifest Number	Weight (lbs)	Weight (tons)
11/21/94	3723626	36,960	18.48
11/21/94	3723627	42,800	21.40
11/21/94	3723628	45,580	22.79
		Total	**62.67**

TABLE 4

SUMMARY OF DISPOSAL MANIFESTS - UNIT I

STANLEY TOOLS - FOWLERVILLE, MICHIGAN

Date	Manifest Number	Weight (lbs)	Weight (tons)
12/19/94	4103805	39,800	19.90
12/19/94	4103806	39,520	19.76
12/19/94	4103807	39,680	19.84
		Total	59.50

TABLE 5

SUMMARY OF ANALYTICAL RESULTS - POST-EXCAVATION SOIL SAMPLES - UNIT F

STANLEY TOOL - FOWLERVILLE, MICHIGAN

	Analytical Method No.	SO/F-1	SO/F-2	SO/F-3	SO/F-4	SO/F-5	SO/F-6	FD/F-6	TB/F-1
Volatile Organic Compounds (µg/kg)									
Chlorobenzene	8240	<15 U	<8.3 U	<9.7 U	4.6 J	<7.6 U	<8.2 U	2.1 J	<5.0 U
1,1-Dichloroethene	8240	<15 U	<8.3 U	<9.7 U	<8.5 U	<7.6 U	<8.2 U	<8.2 U	1.4 J
Methylene Chloride	8240	12 J	6.4 J	9.1 J	9.9 JB	3 J	2.4 J	7.4 J	1.4 J
Toluene	8240	<15 U	3.1 J	4.9 J	6 J	1.7 J	<8.2 U	4.2 J	<5.0 U
Trichloroethene	8240	<15 U	<8.3 U	<9.7 U	9.4	<7.6 U	<8.2 U	2.1 J	<5.0 U
Semivolatile Organic Compounds (µg/kg)									
Phenol	8270	<1000 U	<550 U	<640 U	<560 U	<500 U	84 J	<540 U	NA
2-Chlorophenol	8270	<1000 U	<550 U	<640 U	<560 U	<500 U	81 J	<540 U	NA
Naphthalene	8270	<1000 U	180 J	<640 U	340 J	<500 U	<540 U	<540 U	NA
Phenanthrene	8270	210 J	<550 U	<640 U	63 J	<500 U	88 J	<540 U	NA
Fluoranthene	8270	270 J	<550 U	<640 U	<560 U	<500 U	99 J	68 J	NA
Pyrene	8270	220 J	<550 U	<640 U	<560 U	<500 U	130 J	56 J	NA
Benzo(a)anthracene	8270	140 J	<550 U	<640 U	<560 U	<500 U	<540 U	<540 U	NA
bis(2-Ethylhexyl)phthalate	8270	380 J	210 J	71 J	6900	<500 U	2500	270 J	NA
Chrysene	8270	160 J	<550 U	<640 U	<560 U	<500 U	56 J	<540 U	NA
Benzo(b)fluoranthene	8270	180 J	<550 U	<640 U	<560 U	<500 U	56 J	<540 U	NA
Benzo(K)fluoranthene	8270	<1000 U	<550 U	<640 U	<560 U	<500 U	<540 U	60 J	NA
Benzo(a)pyrene	8270	110 J	<550 U	<640 U	<560 U	<500 U	<540 U	<540 U	NA
Polychlorinated Biphenyls (µg/kg)									
Aroclor 1248	8080	320 *	<55 U	<64 U	280	<50 U	640	130	NA
Aroclor 1254	8080	NC	<55 U	<64 U	<110 U	<50 U	<220 U	<54 U	NA

* = Reported concentration may be biased high due to the presence of Aroclor 1254
J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 5 (Continued)

	Analytical Method No.	SO/F-1	SO/F-2	SO/F-3	SO/F-4	SO/F-5	SO/F-6	FD/F-6	TB/F-1
Metals (mg/kg)									
Arsenic	7060	17.3	55.6	18.2	13.9	6.5	17.8	11.1	NA
Barium	6010	303	169	186	195	55.9	148	119	NA
Cadmium	6010	2.2	1	<0.97 U	1	<0.76 U	0.98	<0.82 U	NA
Chromium	6010	2110	51.4	30.1	10100	49	1700	694	NA
Copper	6010	2490	74.8	34	6480	102	1450	634	NA
Lead	7421	52.7	11.7	8.1	45	5.1	70	18.2	NA
Mercury	7471	0.23 J	<0.17 U	<0.19 U	<0.17 U	<0.15 U	<0.16 U	<0.16 U	NA
Nickel	6010	1350	28.2	13.8	2680	30.9	680	332	NA
Selenium	7740	1 J	0.46 J	0.62 J	0.98	<0.76 U	0.59 J	0.39 J	NA
Silver	6010	0.93 J	<1.7 U	<1.9 U	<1.7 U	<1.5 U	<1.6 U	0.68 J	NA
Zinc	6010	1590	100	58.2	2250	52.4	1740	1740	NA
Cyanide (mg/kg)	9010/9012	10.6	1.4	4.3	124	1	40.4	4.9	
Total Chromatographable Organics (mg/kg)	GC/FID	360	72	28	2400	19	1200	180	NA

* = Reported concentration may be based high due to the presence of Aroclor 1254
J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 6

SUMMARY OF ANALYTICAL RESULTS - POST-EXCAVATION SOIL SAMPLES - UNIT G

STANLEY TOOLS - FOWLERVILLE, MICHIGAN

	Analytical Method No.	SO/G-1	SO/G-2	SO/G-3	SO/G-4	FD/G-4	SO/G-5	SO/G-6	SO/G-7
Volatile Organic Compounds (µg/kg)									
Methylene Chloride	8240	<6.7 U	<5.9 U	1.5 J	<5.8 U	<6.2 U	1.6 J	1.9 J	3.2 J
Semivolatile Organic Compounds (µg/kg)									
Naphthalene	8270	<440 U	<390 U	<390 U	<380 U	<410 U	<400 U	<400 U	<660 U
Acenaphthylene	8270	49 J	<390 U	<390 U	<380 U	46 J	<400 U	<400 U	<660 U
Acenphthene	8270	<440 U	<390 U	<390 U	<380 U	<410 U	<400 U	<400 U	<660 U
Fluorene	8270	62 J	<390 U	<390 U	<380 U	92 J	<400 U	<400 U	<660 U
Phenanthrene	8270	470	<390 U	69 J	96 J	710	<400 U	<400 U	<660 U
Anthracene	8270	93 J	<390 U	<390 U	<380 U	230 J	<400 U	<400 U	<660 U
Fluoranthene	8270	580	<390 U	130 J	250 J	1500	<400 U	<400 U	<660 U
Pyrene	8270	500	<390 U	120 J	220 J	1400	<400 U	<400 U	<660 U
Benzo(a)anthracene	8270	220 J	<390 U	58 J	140 J	910	<400 U	<400 U	<660 U
Chrysene	8270	280 J	<390 U	83 J	150 J	970	<400 U	<400 U	<660 U
Benzo(b)fluoranthene	8270	180 J	<390 U	100 J	120 J	1300	<400 U	<400 U	<660 U
Benzo(k)fluoranthene	8270	300 J	<390 U	<390 U	160 J	<410 U	<400 U	<400 U	73 J
Benzo(a)pyrene	8270	240 J	<390 U	66 J	160 J	1000	<400 U	<400 U	<660 U
Indeno(1,2,3-cd)pyrene	8270	160 J	<390 U	46 J	96 J	540	<400 U	<400 U	<660 U
Benzo(g,h,i)perylene	8270	170 J	<390 U	68 J	89 J	520	<400 U	<400 U	<660 U
Polychlorinated Biphenyls (µg/kg)									
Aroclor 1248	8080	<44 U	<39 U	<39 U	<38 U	<41 U	<40 U	<40 U	<66 U
Aroclor 1254	8080	<44 U	<39 U	<39 U	<38 U	<41 U	<40 U	<40 U	<66 U

J = Result is detected below the reporting limit or is an estimated concentration

NA = Not applicable

B = Compound is also detected in the blank

NC = Present but not calculated

U = Not detected

TABLE 6 (Continued)

	Analytical Method No.	SO/G-1	SO/G-2	SO/G-3	SO/G-4	FD/G-4	SO/G-5	SO/G-6	SO/G-7
Metals (mg/kg)									
Arsenic	7060	4.8	4	4.3	2.6	3.1	3.5	5	18.2
Barium	6010	45	17.6	36.4	17.4	20.2	14.5	10	171
Cadmium	6010	<0.67 U	<0.59 U	<0.59 U	<0.58 U	<0.62 U	<0.60 U	<0.61 U	1.1
Chromium	6010	77.8	28.4	107	8	8.2	12.7	6.1	21.1
Copper	6010	75.8	32.6	87.4	6.8	6.9	7.9	6.6	50.2
Lead	7421	37.7	5.5 J	17	7.8	6.8	2.8	2.4 J	13.4
Mercury	7471	0.089 J	<0.12 U	<0.12 U	<0.12 U	0.072 J	<0.12 U	<0.12 U	<0.20 U
Nickel	6010	38.7	18	49.5	6.5	7.8	6.9	6.8	19.7
Selenium	7740	0.35 J	<0.59 U	<1.2 U	<0.58 U	0.3 J	<0.60 U	<0.61 U	2
Zinc	6010	161	49.4	161	19.7	22.1	31.8	28	68
Cyanide (mg/kg)	9010/9012	<0.67 U	<0.59 U	0.64	<0.58 U	<0.62 U	<0.60 U	<0.61 U	<1.0 U
Total Chromatographable Organics (mg/kg)	GC/FID	53	48	160	13	87	4.3 J	5.5	34

J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 6 (Continued)

	Analytical Method No.	SO/G-8	FD/G-8	SO/G-9	SO/G-10	FB/G-4	FB/G-8	TB/G-1
Volatile Organic Compounds (µg/kg)								
Methylene Chloride	8240	3.4 JB	1.7 J	1.7 J	2.6 JB	<5.0 U	1.1 J	1.1 J
Semivolatile Organic Compounds (µg/kg)								
Naphthalene	8270	690 J	47 J	160 J	<420 U	<10 U	<15 U	NA
Acenaphthylene	8270	250 J	<410 U	58 J	<420 U	<10 U	<15 U	NA
Acenphthene	8270	470 J	<410 U	89 J	<420 U	<10 U	<15 U	NA
Fluorene	8270	1600 J	76 J	210 J	<420 U	<10 U	<15 U	NA
Phenanthrene	8270	11000	800	1600	<420 U	<10 U	<15 U	NA
Anthracene	8270	2800	200 J	440 J	<420 U	<10 U	<15 U	NA
Fluoranthene	8270	17000	1200	2600	<420 U	<10 U	<15 U	NA
Pyrene	8270	11000	870	1800	<420 U	<10 U	<15 U	NA
Benzo(a)anthracene	8270	7900	590	1300	<420 U	<10 U	<15 U	NA
Chrysene	8270	7900	600	1300	<420 U	<10 U	<15 U	NA
Benzo(b)fluoranthene	8270	8500	960	<500 U	<420 U	<10 U	<15 U	NA
Benzo(k)fluoranthene	8270	7800	<410 U	2300	<420 U	<10 U	<15 U	NA
Benzo(a)pyrene	8270	9500	720	1500	<420 U	<10 U	<15 U	NA
Indeno(1,2,3-cd)pyrene	8270	5400	360 J	770	<420 U	<10 U	<15 U	NA
Benzo(g,h,i)perylene	8270	5200	360 J	750	<420 U	<10 U	<15 U	NA
Polychlorinated Biphenyls (µg/kg)								
Aroclor 1248	8080	57	<41 U	<50 U	<42 U	<1.0 U	<1.0 U	NA
Aroclor 1254	8080	<46 U	<41 U	53	<42 U	<1.0 U	<1.0 U	NA

J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 6 (Continued)

	Analytical Method No.	SO/G-8	FD/G-8	SO/G-9	SO/G-10	FB/G-4	FB/G-8	TB/G-1
Metals (mg/kg)								
Arsenic	7060	6.1	5.5	9.5	2.4	<0.0050 U	<0.0050 U	NA
Barium	6010	37	13.2	71	86.4	<0.010 U	<0.010 U	NA
Cadmium	6010	<0.69 U	<0.62 U	<0.76 U	<0.64 U	<0.0050 U	<0.0050 U	NA
Chromium	6010	14.2	9.8	49	24.2	<0.010 U	<0.010 U	NA
Copper	6010	16.9	10.4	54.9	40.5	<0.020 U	<0.020 U	NA
Lead	7421	19.7	10	44.6	12.8 J	0.002 J	<0.010 U	NA
Mercury	7471	<0.14 U	<0.12 U	<0.15 U	<0.13 U	<0.00020 U	<0.00020 U	NA
Nickel	6010	11.3	8.2	27.5	15.6	<0.040 U	<0.040 U	NA
Selenium	7740	0.4 J	<0.62 U	0.69 J	<0.64 U	<0.0050 U	<0.0050 U	NA
Zinc	6010	48.9	31.9	80.5	51.7	<0.020 U	<0.020 U	NA
Cyanide (mg/kg)	9010/9012	2.1	0.69	0.89	0.83	<0.010 U	<0.010 U	NA
Total Chromatographable Organics (mg/kg)	GC/FID	110	160	45	4.7 J	<0.10 U	<0.10 U	NA

J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 7

SUMMARY OF ANALYTICAL RESULTS - POST EXCAVATION SOIL SAMPLES - UNIT H

STANLEY TOOL - FOWLERVILLE, MICHIGAN

	Analytical Method No.	SO/H-1/1		SO/H-1/2		SO/H-2/1		SO/H-2/2		SO/H-3/1		FB/H-3/2	
Volatile Organic Compounds (µg/kg)													
Chlorobenzene	8240	<7.1	U	<6.2	U	<5.7	U	<6.0	U	<5.8	U	<5.0	U
Methylene Chloride	8240	4.3	JB	3.9	JB	2.9	JB	2.9	JB	2.7	JB	4	JB
1,1,1-Trichloroethane	8240	5.9	J	<6.2	U	<5.7	U	6	U	<5.8	U	<5.0	U
Semivolatile Organic Compounds (µg/kg)													
bis(2-Ethylhexyl)pthalate	8270	<470	U	<410	U	<380	U	<390	U	<380	U	3.7	J
Metals (mg/kg)													
Arsenic	7060	3.3		1.5		2.2		8.2		3.5		<0.0050	U
Barium	6010	79		53		31.9		29.5		28.3		<0.010	U
Cadmium	6010	0.6	J	<0.62	U	<0.57	U	0.63		<0.58	U	<0.0050	U
Chromium	6010	12.8		10.3		7.9		6.4		11.6		<0.010	U
Copper	6010	24.5		11.4		8.9		14.4		9.3		0.0053	J
Lead	7421	10.8		5.7		3.8		2.3		3.7		0.0026	J
Nickel	6010	13.6		13.6		9.7		13.1		11.9		<0.040	U
Selenium	7740	0.9		<0.62	U	<0.57	U	<0.60	U	0.23		<0.0050	U
Zinc	6010	37.1		30.2		21.7		20.9		18		0.011	J
Total Chromatographable Organics (mg/kg)	GC/FID	50		14		8		6		12		<0.15	U

J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 7 (Continued)

	Analytical Method No.	SO/H-3/2		FD/H-2/1		TB/H-1	
Volatile Organic Compounds (µg/kg)							
Chlorobenzene	8240	<6.1	U	3.2	J	<5.0	U
Methylene Chloride	8240	3	JB	3.7	JB	3	JB
1,1,1-Trichloroethane	8240	<6.1	U	3.2	J	<5.0	U
Semivolatile Organic Compounds (µg/kg)							
bis(2-Ethylhexyl)pthalate	8270	<400	U	<390	U	NA	
Metals (mg/kg)							
Arsenic	7060	3.4		4.1		NA	
Barium	6010	16		37.2		NA	
Cadmium	6010	<0.61	U	<0.58	U	NA	
Chromium	6010	5.4		8.3		NA	
Copper	6010	5.7		9.3		NA	
Lead	7421	3.3		7.2		NA	
Nickel	6010	6.9		11.8		NA	
Selenium	7740	<0.61	U	<1.2	U	NA	
Zinc	6010	21.4		25.2		NA	
Total Chromatographable Organics (mg/kg)	GC/FID	9.9		9.7		NA	

J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 8

SUMMARY OF ANALYTICAL RESULTS - POST EXCAVATION SOIL SAMPLES - UNIT I

STANLEY TOOL - FOWLERVILLE, MICHIGAN

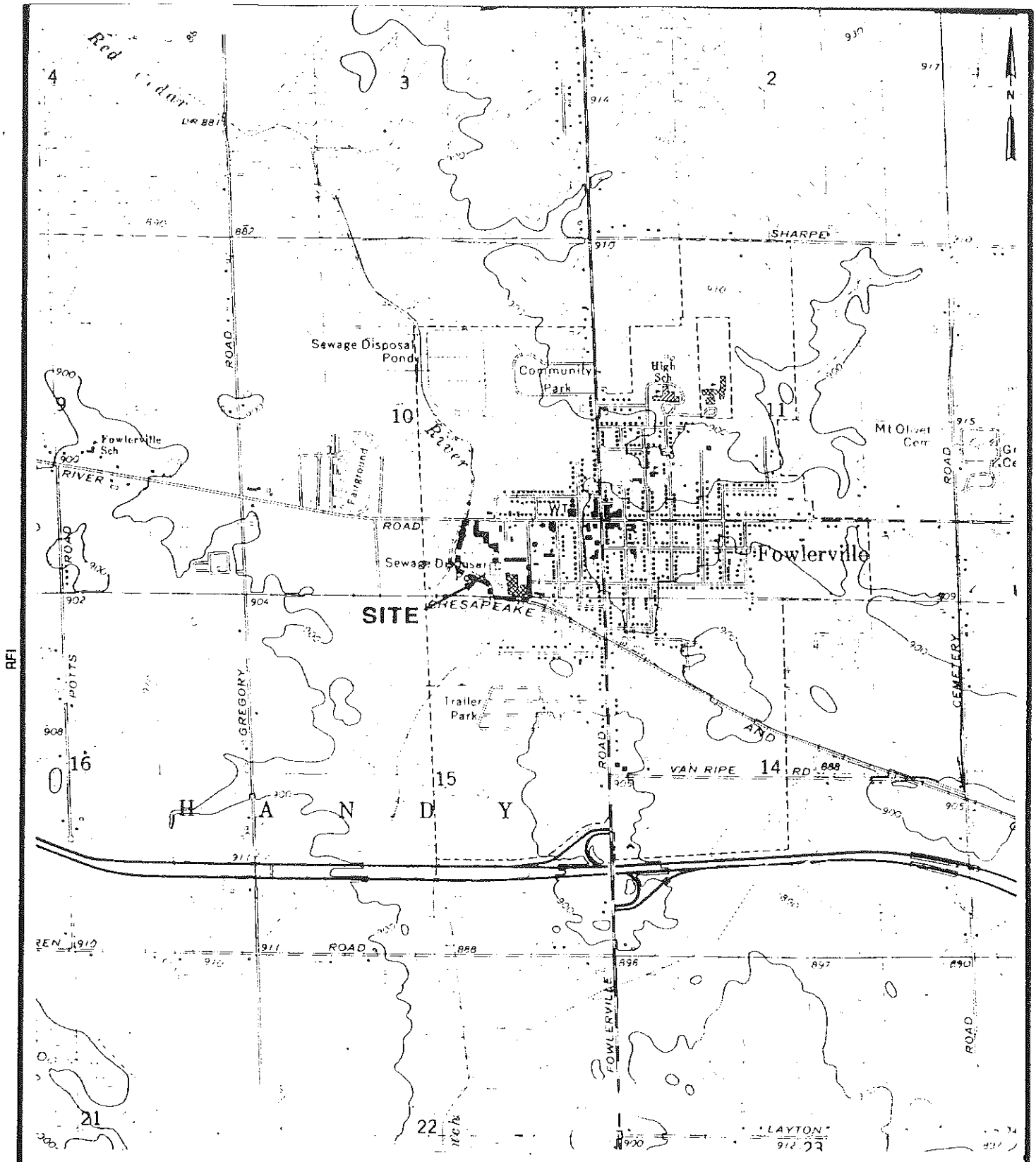
	Analytical Method No.	SO/I-1/1	SO/I-1/2	SO/I-2/1	SO/I-2/2	SO/I-3/1	FD/I-3/1	SO/I-3/2	TB/I-4	FB/I-3/1
Volatile Organic Compounds (µg/kg)										
Chlorobenzene	8240	5.2 J	<5.6 U	<7.6 U	<5.6 U	<5.9 U	<6.1 U	<5.6 U	<5.0 U	<5.0 U
1,1-Dichloroethane	8240	<5.7 U	<5.6 U	<7.6 U	<5.6 U	<5.9 U	<6.1 U	4.5 J	<5.0 U	<5.0 U
1,1-Dichloroethene	8240	<5.7 U	<5.6 U	<7.6 U	<5.6 U	<5.9 U	<6.1 U	1.9 J	<5.0 U	<5.0 U
1,2-Dichloroethene (Total)	8240	<5.7 U	<5.6 U	<7.6 U	<5.6 U	<5.9 U	<6.1 U	50	<5.0 U	<5.0 U
Methylene Chloride	8240	2.1 JB	2.4 JB	5.2 J	3.2 JB	4.3 JB	6.9 B	5.5 JB	1.2 J	1.4 J
Toluene	8240	<5.7 U	<5.6 U	1.7 J	<5.6 U	<5.9 U	1.6 J	3.1 J	<5.0 U	<5.0 U
Vinyl Chloride	8240	<11 U	<11 U	<15 U	<11 U	<12 U	<12 U	15 U	<10 U	<10 U
Semivolatile Organic Compounds (µg/kg)										
1,2 - Dichlorobenzene	8270	50 J	<370 U	250 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Naphthalene	8270	<380 U	<370 U	250 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Fluorene	8270	<380 U	<370 U	85 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Phenanthrene	8270	<380 U	<370 U	220 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Fluoranthene	8270	<380 U	<370 U	190 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Pyrene	8270	<380 U	<370 U	150 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Benzo(a)anthracene	8270	<380 U	<370 U	87 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
bis(2-Ethylhexyl)phthalate	8270	<380 U	<370 U	67 J	52 J	<390 U	<400 U	<370 U	NA	<10 U
Chrysene	8270	<380 U	<370 U	140 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Benzo(b)fluoranthene	8270	<380 U	<370 U	210 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Benzo(a)pyrene	8270	<380 U	<370 U	97 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Indeno(1,2,3-cd)pyrene	8270	<380 U	<370 U	81 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Benzo(g,h,i)perylene	8270	<380 U	<370 U	90 J	<370 U	<390 U	<400 U	<370 U	NA	<10 U
Polychlorinated Biphenyls (µg/kg)										
Aroclor 1254	8080	<38 U	<37 U	44 J	<37 U	<39 U	<40 U	<37 U	NA	<1.0 U

J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected

TABLE 8 (Continued)

	Analytical Method No.	SO/I-1/1	SO/I-1/2	SO/I-2/1	SO/I-2/2	SO/I-3/1	FD/I-3/1	SO/I-3/2	TB/I-4	FB/I-3/1
Metals (mg/kg)										
Arsenic	7060	7.7	41.7	34.1	6.7	13.6	11 J	7.1	NA	<0.0050 U
Barium	6010	45.2	24.2	98.3	26.2	36.8	26	27.4	NA	<0.010 U
Cadmium	6010	<0.57 U	<0.56 U	0.99	<0.56 U	0.45 J	<0.61 U	<0.56 U	NA	<0.0050 U
Chromium	6010	22.2	9.5	484	27.1	8.6	5.8	8.8	NA	<0.010 U
Copper	6010	48.8	25.3	505	22.3	10.8	8.8	11.4	NA	<0.020 U
Lead	7421	3.6	4.2	75.9	5.8	3.5	1.9 J	3.6	NA	<0.010 U
Mercury	7471	<0.11 U	<0.11 U	0.32	<0.11 U	<0.12 U	<0.12 U	<0.11 U	NA	<0.00020 U
Nickel	6010	40.6	18.6	740	29.4	11.1	9.9	11.8	NA	<0.040 U
Selenium	7740	<1.1 U	0.33 J	0.35 J	<1.1 U	<0.59 U	<0.61 U	<1.1 U	NA	<0.0050 U
Zinc	6010	52.1	27.9	1480	63.2	30.3	18	30	NA	<0.020 U
Cyanide (mg/kg)	9010/9012	<0.57 U	<0.56 U	3	1.5	<0.59 U	<0.61 U	<0.56 U	NA	<0.010 U
Total Chromatographable Organics (mg/kg)	GC/FID	21	28	270	34	17	12	24	NA	<0.10 U

J = Result is detected below the reporting limit or is an estimated concentration
NA = Not applicable
B = Compound is also detected in the blank
NC = Present but not calculated
U = Not detected



BASE MAP SOURCE: USGS 7 1/2 minute topographic quadrangle map: Fowlerville, Michigan 1973.

STANLEY TOOLS

FOWLERVILLE, MICHIGAN

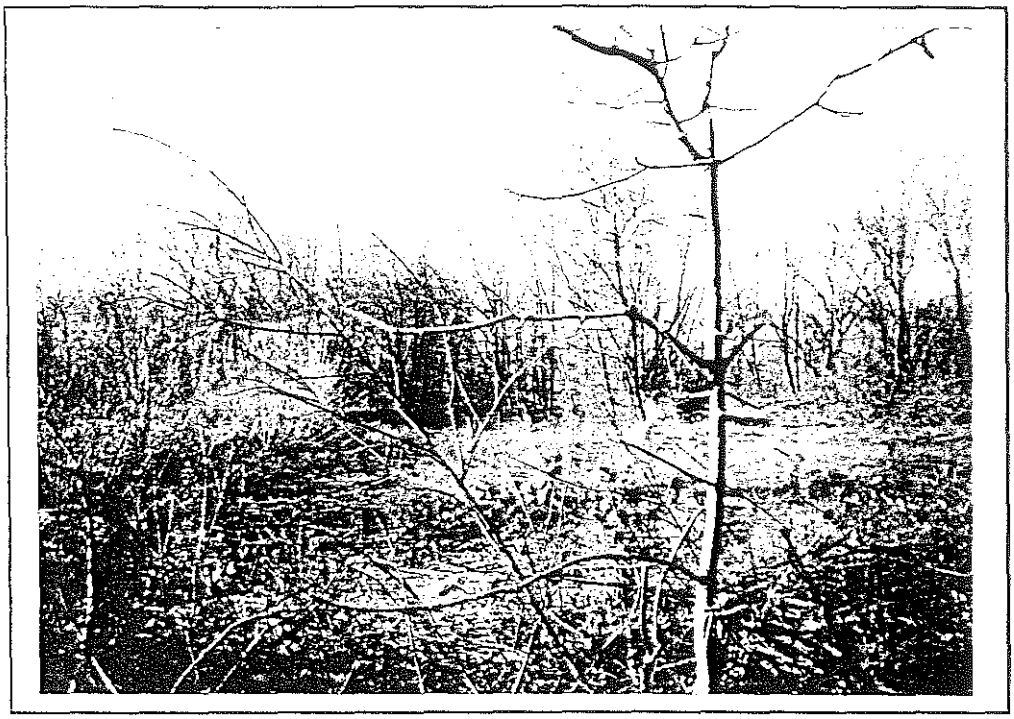
FIGURE 1
SITE VICINITY MAP

JOB NO. 3163-055-148

DAMES & MOORE

APPENDIX A

PHOTOGRAPHS



PHOTOGRAPH 1: Unit F, looking northwest, prior to IRM Work.

PHOTOGRAPH 2: Unit F, looking northwest, after sludge removal.

PHOTOGRAPH 3: Unit G, looking northeast, after IRM Work.

PHOTOGRAPH 4: Unit H, looking west, after sludge removal.

PHOTOGRAPH 5: Unit I, looking west, after sludge removal.

APPENDIX B

EXCAVATION PERMIT

LIVINGSTON COUNTY

SOIL EROSION AND SEDIMENTATION CONTROL

ENFORCING AGENCY

GRADING PERMIT

ISSUED TO: Mark Sydorowych

(OWNER)

TO PERFORM GRADING AND EROSION CONTROL WORK

AT The old Stanley Industrial Site, In th Village of Fowlerville

(LOCATION)

THE OWNER HAS AGREED TO COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF LIVINGSTON COUNTY AND TO DO NO WORK NOT SPECIFICALLY COVERED BY THIS PERMIT.

DATE November 04, 1994 NO. #836 (Eight Thousand Thirty Six)

THIS CARD MUST BE CONSPICUOUSLY POSTED AT FRONT OF WORK SITE

LIVINGSTON COUNTY DRAIN COMMISSIONER
PERMIT

Under the Soil Erosion and Sedimentation Control P.A. 347 of 1972

Permit#: Eight Hundred Thirty Six (#836)

Date Issued: November 04, 1994

Expiration Date: November 04, 1995

Under the provisions of Act 347, P. A. 1972, authority is hereby granted to, Mark Sydorowych, (O'brien Gere Technical Services) To perform neccessery grade work from start to finish for the Removal of Contaminated soils and stabilization of soils disturbed during this procces.

Located in Township of Handy, Village of Fowlerville , Livingston County, Michigan, Section #10 , T3N - R3E.

Work to be done under authority of this permit shall be done in a workmanlike manner in accordance with the approved prints and specifications as prepared by Dames & Moore. as attached, and is subject to the following special restrictions, limitation and instructions :

1. Notify Livingston County Drain Commissioners Office 24Hrs prior to start of grade work.

2. In accordance with Public Act No. 53, of 1974 the permit holder shall call Miss Dig for staking and locating of utilities, at least 72 hours in advance of the start of any work.

REMEMBER ! "BEFORE YOU DIG CALL MISS DIG"

3. Silt fabric fence shall be placed along perimeter on all low lying areas of construction site to filter runoff before leaving project.

4. All temporary erosion control devices shall be installed prior to the start of massive earth disruption.

5. If Plan does not denote a detailed erosion control device to restrict tracking of material onto the highway. Stone diapers shall be installed at all ingress/egress areas of the site prior to the start of massive earth disruption. Diapers shall be of crushed stone and shall be a minimum of 75' in length.

6. All unimproved disturbed areas shall be stripped of topsoil which will be stored on site during the excavating stage. Topsoil piles shall be seeded and mulched, or matted with straw in the non-growing season, immediately after the stripping process, to prevent wind and water erosion.

7. Soil erosion controls shall be monitored daily by the on-site engineer, or contractor, which ever case applies.

8 On site ditches shall be of the flat bottom type minimum width of 2' with a minimum of 3 horizontal to 1 vertical side slopes, 3:1.

9. Steep slopes will need flow checks to prevent scouring of the ditch bottoms. These shall be installed as directed by the engineer or inspector.

10. Slopes in excess of 3 horizontal to 1 vertical shall not be used except with a mechanical device such as a retaining wall, terracing, or other prior approved device.

11 All storm drain outlets that do not empty into the retention/detention pond shall have a temporary 5'x10'x3' sump installed at the termination of the storm sewer. Upon completion of the stabilization work the sump area shall be filled and rip rapped with cobble stone. Silt traps shall be inspected after each storm

12 Storm water outlets must have rip rap. All outlets shall be rip rapped with a minimum of 15 sq. yards of 6" or larger cobble stone.

13. Rip-rap shall be of cobble stone, 6" in diameter or larger. Grouting may be necessary, and shall be a minimum of 6" in depth with the cobble set in the cement slurry.

14. All unimproved disturbed areas shall be re-top soiled, with a minimum of 3" of material, seeded, mulched and tacked within 15 days of the completion of the massive earth disruption. In the non-growing season straw matting will suffice. Hydroseeding will be an acceptable alternate for mulching. Extreme care should be exercised in spring and fall periods as a frost will break the bind of the hydroseeding, which will affect the effectiveness of this procedure.

15. In the non growing season, temporary stabilization of massively exposed areas for winter stabilization shall be done with straw matting.

16. Permit fees during the winter period of non construction, (December 1 thru March 31), shall not be imposed if the permit holder temporarily stabilizes the exposed areas with straw matting, and other approved controls, and obtains a winter stabilization certificate from this office.

17. Periodic inspections will be made throughout the course of the project. It will be the responsibility of the managers of the project to contact this office for the final inspection at the end of the project.

Sincerely,

Mark T. Hathaway
Environmental Inspector

cc/ Village of Fowlerville
File

APPENDIX C

ENVOTECH MANAGEMENT SERVICES, INC.

LABORATORY RESULTS

From: ENVOTECH MANAGEMENT SERVICES, INC.
ANALYTICAL LABORATORY
49350 N. I-94 SERVICE DRIVE
BELLEVILLE, MI. 48111

November 9, 1994

To: OBG
39500 Orchard Hill Place
Novi, MI 48375

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AA01371 CLIENT CODE: 000
Purchase order number: VERBAL Tracking number: 64446 G + I
Generator name: The Stanley Works
Waste Name: PLATING SLUDGE
Sample collection date: 11/01/94 Time: 09:00
Lab submittal date: 11/01/94 Time: 09:17
Received by: JV Validated by: CR

Parameter: F006-12 TREATABILITY
Method reference: SW846 6010 Unit: MG/L
Result: see below
Date started: 11/09/94 Date finished: 11/09/94
Time started: Analyst: AS

Parameter: RCI CHARACTERISTICS
Method reference: SW 846 Unit:
Result: see below
Date started: 11/02/94 Date finished: 11/02/94
Time started: Analyst: JC

Parameter: AMENABLE CYANIDE
Method reference: SW846 9012
Result: 4.64 MG/KG MDL or sensitivity: 0.50
Date started: Date finished:
Time started: Analyst:

Parameter: TCLP METALS--RCRA/MDNR LIST
Method reference: SW846 6010 Unit: MG/L
Result: see below
Date started: 11/03/94 Date finished: 11/03/94
Time started: Analyst: AE

Parameter: TCLP ZHE CONSTITUENTS
Method reference: SW8468010-20 Unit: MG/L
Result: see below
Date started: 11/08/94 Date finished: 11/08/94
Time started: Analyst: KMD

OBG Sample I.D. AA01371 (continued)
Page: 2
November 9, 1994

Parameter: BASE NEUTRAL ACID EXTRACTIBLES
Method reference: SW846 8040/90 Unit: MG/L
Result: see below
Date started: 11/04/94 Date finished: 11/04/94
Time started: Analyst: KMD

Parameter: TOTAL PCB
Method reference: SW846 8080 Unit: MG/KG
Result: see below
Date started: 11/04/94 Date finished: 11/04/94
Time started: Analyst: KMD

Data for F006-12 TREATABILITY MG/L:

Component Name	Result	Component MDL
CADMIUM MG/L	Less than	0.066
CHROMIUM MG/L	0.05	0.19
LEAD MG/L	Less than	0.37
SILVER MG/L	0.01	0.07
NICKEL MG/L	Less than	0.32
CYANIDE,TOTAL MG/KG	Less than	0.50
CYANIDE, AMENABLE MG/KG	Less than	0.50

Data for RCI CHARACTERISTICS :

Component Name	Result	Component MDL
COROSIVITY	7.17	0.01
FLASHPOINT	>140	1 DEG F
CYANIDE, TOTAL	12.02	0.50
SULFIDE, REACTIVE	<100	1

Data for TCLP METALS--RCRA/MDNR LIST MG/L:

Component Name	Result	Component MDL
SELENIUM	Less than	0.10
ARSENIC	Less than	0.06
ZINC	9.7	0.01
LEAD	Less than	0.04
CADMIUM	Less than	0.01
CHROMIUM	0.43	0.01
COPPER	2.5	0.01
SILVER	0.01	0.01
NICKEL	0.50	0.08
BARIUM	2.3	0.11
MERCURY	Less than	0.02

Data for TCLP ZHE CONSTITUENTS MG/L:

Component Name	Result	Component MDL
1,4-DICHLORBENZENE	Less than	0.1

OBG Sample I.D. AA01371 (continued)
Page: 3
November 9, 1994

Data for TCLP SEE CONSTITUENTS (continued):

Component Name	Result	Component MDL
MEK	Less than	0.1
CHLOROFORM	Less than	0.1
BENZENE	Less than	0.1
CARBON TETRACHLORIDE	Less than	0.1
1,2-DICHLOROETHANE	Less than	0.1
1,1-DICHLOROETHYLENE	Less than	0.2
VINYL CHLORIDE	Less than	0.1
TRICHLOROETHYLENE	Less than	0.05
TETRACHLOROETHYLENE	Less than	0.05
CHLOROBENZENE	Less than	0.05

Data for BASE NEUTRAL ACID EXTRACTIBLES MG/L:

Component Name	Result	Component MDL
1,4-Dichlorobenzene	below rep lims	0.50
2,4- Dintrotoluene	below rep lims	0.10
Hexachlorobenzene	below rep lims	0.10
Hexachloroethane	below rep lims	0.50
Nitrobenzene	below rep lims	0.50
Pyridine	below rep lims	1.0
Hexachlorobutadiene	below rep lims	0.50
o-Cresol	below rep lims	3.4
m-Cresol	below rep lims	5.6
p-Cresol	below rep lims	5.6
Cresol	below rep lims	5.6
Pentachlorophenol	below rep lims	7.4
2,4,5-Trichlorophenol	below rep lims	7.4
2,4,6-Trichlorophenol	below rep lims	7.4

Data for TOTAL PCB MG/KG:

Component Name	Result	Component MDL
AROCLOR 1016	below rep lims	1.0
AROCLOR 1221	below rep lims	1.0
AROCLOR 1232	below rep lims	1.0
AROCLOR 1242	below rep lims	1.0
AROCLOR 1248	below rep lims	1.0
AROCLOR 1254	below rep lims	1.0
AROCLOR 1260	below rep lims	1.0
TOTAL PCBS	below rep lims	1.0

OBG Sample I.D. AA01372 (continued)
Page: 2
November 9, 1994

Parameter: BASE NEUTRAL ACID EXTRACTIBLES
Method reference: SW8468040/90 Unit: MG/L
Result: see below
Date started: 11/08/94 Date finished: 11/08/94
Time started: Analyst: KMD

Parameter: TOTAL PCB
Method reference: SW846 8080 Unit: MG/KG
Result: see below
Date started: 11/04/94 Date finished: 11/04/94
Time started: Analyst: KMD

Data for F006-12 TREATABILITY MG/L:

Component Name	Result	Component MDL
CADMIUM MG/L	Less than	0.066
CHROMIUM MG/L	0.10	0.19
LEAD MG/L	0.06	0.37
SILVER MG/L	Less than	0.07
NICKEL MG/L	Less than	0.32
CYANIDE,TOTAL MG/KG	11	0.50
CYANIDE, AMENABLE MG/KG	Less than	0.50

Data for RCI CHARACTERISTICS :

Component Name	Result	Component MDL
COROSIVITY	7.27	0.01
FLASHPOINT	>140	1 DEG F
CYANIDE, TOTAL	25.5	0.50
SULFIDE, REACTIVE	<100	1

Data for TCLP METALS--RCRA/MDNR LIST MG/L:

Component Name	Result	Component MDL
SELENIUM	Less than	0.10
ARSENIC	Less than	0.06
ZINC	12	0.01
LEAD	Less than	0.04
CADMIUM	Less than	0.01
CHROMIUM	0.17	0.01
COPPER	7.7	0.01
SILVER	0.02	0.01
NICKEL	6.4	0.08
BARIUM	2.0	0.11
MERCURY	Less than	0.02

Data for TCLP ZHE CONSTITUENTS MG/L:

Component Name	Result	Component MDL
1,4-DICHLOROBENZENE	Less than	0.1

OBG Sample I.D. AA01372 (continued)
Page: 3
November 9, 1994

Data for TCLP ZHE CONSTITUENTS (continued):

Component Name	Result	Component MDL
MEK	Less than	0.1
CHLOROFORM	Less than	0.1
BENZENE	Less than	0.1
CARBON TETRACHLORIDE	Less than	0.1
1,2-DICHLOROETHANE	Less than	0.1
1,1-DICHLOROETHYLENE	Less than	0.2
[illegible]	Less than	0.1
TRICHLOROETHYLENE	Less than	0.09
TETRACHLOROETHYLENE	Less than	0.05
CHLOROBENZENE	Less than	0.05

Data for BASE NEUTRAL ACID EXTRACTIBLES MG/L:

Component Name	Result	Component MDL
1,4-Dichlorobenzene	BELOW REP LIMS	0.50
2,4- Dintrotoluene	BELOW REP LIMS	0.10
Hexachlorobenzene	BELOW REP LIMS	0.10
Hexachloroethane	BELOW REP LIMS	0.50
Nitrobenzene	BELOW REP LIMS	0.50
Pyridine	BELOW REP LIMS	1.0
Hexachlorobutadiene	BELOW REP LIMS	0.50
o-Cresol	BELOW REP LIMS	3.4
m-Cresol	BELOW REP LIMS	5.6
p-Cresol	BELOW REP LIMS	5.6
Cresol	BELOW REP LIMS	5.6
Pentachlorophenol	BELOW REP LIMS	7.4
2,4,5-Trichlorophenol	BELOW REP LIMS	7.4
2,4,6-Trichlorophenol	BELOW REP LIMS	7.4

Data for TOTAL PCB MG/KG:

Component Name	Result	Component MDL
AROCLOR 1016	below rep lims	1.0
AROCLOR 1221	below rep lims	1.0
AROCLOR 1232	below rep lims	1.0
AROCLOR 1242	below rep lims	1.0
AROCLOR 1248	below rep lims	1.0
AROCLOR 1254	below rep lims	1.0
AROCLOR 1260	below rep lims	1.0
TOTAL PCBS	below rep lims	1.0

If there are any questions regarding this data, please call.

CHARLES E. ROBBERTS
QA/QC OFFICER

BELINDA PERO
LAB MANAGER

From: ENVOTECH MANAGEMENT SERVICES, INC.
ANALYTICAL LABORATORY
49350 N. I-94 SERVICE DRIVE
BELLEVILLE, MI. 48111

December 1, 1994

To: O'Brien & Gere
39500 Orchard Hill Place
Novi, MI 48375

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AA01535 CLIENT CODE: 000
Purchase order number: VERBAL Tracking number: 64643-1
Generator name: The Stanley Works
Waste Name: SOIL
Sample collection date: 11/17/94 Time: 11:00
Lab submittal date: 11/17/94 Time: 11:15
Received by: JV Validated by: CR

Parameter: RCI CHARACTERISTICS
Method reference: SW 846 Unit:
Result: see below
Date started: 11/18/94 Date finished: 11/18/94
Time started: Analyst: KMD

Parameter: AMENABLE CYANIDE
Method reference: SW846 9012
Result: 2.58 MG/KG MDL or sensitivity: 0.50
Date started: Date finished:
Time started: Analyst:

Parameter:
Method reference: Unit:
Result: see below
Date started: 11/21/94 Date finished: 11/21/94
Time started: Analyst: AZ

Parameter: F SERIES 6 TO 19 TREATABILITY
Method reference: SW846 6010 Unit: MG/L
Result: see below
Date started: 12/01/94 Date finished: 12/01/94
Time started: Analyst: AS

Data for RCI CHARACTERISTICS :

Component Name	Result	Component MDL
COROSIVITY	7.87	0.01
FLASHPOINT	>140	1 DEG F
CYANIDE, TOTAL	5.33	0.50

O'Brien & Gere Sample I.D. AA01535 (continued)
Page: 2
December 1, 1994

Data for RCI CHARACTERISTICS (continued):

Component Name	Result	Component MDL
SULFIDE, REACTIVE	<100	1

Data for :

Component Name	Result	Component MDL
SELENIUM	Less than	0.10
ARSENIC	0.08	0.06
ZINC	7.59	0.10
LEAD	0.03	0.04
CADMIUM	0.01	0.01
CHROMIUM	0.44	0.01
COPPER	1.63	0.01
SILVER	0.02	0.01
NICKEL	0.42	0.08
BARIUM	4.45	0.11
MERCURY	Less than	0.02

Data for F SERIES 6 TO 19 TREATABILITY MG/L:

Component Name	Result	Component MDL
CADMIUM MG/L	0.01	0.066
CHROMIUM MG/L	0.06	0.19
LEAD MG/L	0.04	0.37
SILVER MG/L	0.01	0.07
NICKEL MG/L	<0.08	0.32
CYANIDE,TOTAL MG/KG	3.3	0.50
CYANIDE, AMENABLE MG/KG	<0.5	0.50

If there are any questions regarding this data, please call.

CHARLES E. ROBERTS
QA/QC OFFICER

BELINDA PERO
LAB MANAGER

APPENDIX D

WASTE MANIFESTS

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979 as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10001
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn: Mr. William Guererra
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723602
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol.	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	35	Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110994 M2
152998
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 11 1 99

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space: ENDTECH RECEIVED 47120 LBS AT 24 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JAMES M COMBS JR — Signature: [signature] — Date: Month Day Year: 11 1 99

GENERATOR — TRANSPORTER — FACILITY

ALL SPEC CENTER 00-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10003
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn Mr. William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain Ct 06053

4. Generator's Phone

A. State Manifest Document Number MI 3723604
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone 810-725-8373

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/I
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	35	Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110994 MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
152997

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 11 10 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy BERTRAM
Signature: Roy Bertram
Date: Month Day Year 11 10 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
MDI Received [illegible] @ 26 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD M[illegible]
Signature: [illegible]
Date: Month Day Year 11 09 94

GENERATOR

TRANSPORTER

FACILITY

AT 1-800-[illegible]/08 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-[illegible]/24-8802 24 HOURS PER DAY
CENTER

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10004
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
4. Fowlerville, MI 48836
Attn Mr William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06052

A. State Manifest Document Number: MI 3723605
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: 810-725-837
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	45	Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
152999

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month 11 Day 10 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MIKE DELOR — Signature: Mike Delor — Date: Month 11 Day 10 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: ~~MIKE DELOR~~ — Signature: ~~Mike Delor~~ — Date: Month Day Year

19. Discrepancy Indication Space: EUVOTECH RECEIVED 87640 LBS AT 44 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JAMES M GIBBS Jr — Signature: [signature] — Date: Month 11 Day 10 Year 94

GENERATOR — TRANSPORTER — FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN M... AT 1 800 292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR ☐

Required under authority of Act 64 of P.A. 1979, as amended and Act 136 of P.A. 1969
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039 Expires 9-30-94

1. UNIFORM HAZARDOUS WASTE MANIFEST	2. Generator's US EPA ID No. / Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law
	M I D 0 1 9 9 1 2 2 9 9	9 1 0 D 0 6	

3. Generator's Name and Mailing Address: Stanley Tools, 425 Frank Street, Fenderville, MI 48836 — Generator's Phone ( )
Mail to: Mark Williams, The Stanley Works, 1000 Stanley Drive, New Britain, Ct 06053

4. State Manifest Document Number: MI 3723607
A. State Generator's ID:

5. Transporter 1 Company Name: M.L. Chartier — 6. US EPA ID Number: M I D 0 0 6 5 5 8 2 2 5
B. State Transporter's ID:
C. State Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name — 8. US EPA ID Number:
D. State Transporter's ID:
E. State Transporter's Phone:

9. Designated Facility Name and Site Address: Michigan Disposal, Inc., 49350 N. I-94 Service Drive, Belleville, MI 48111 — 10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1
F. State Facility's ID:
G. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	NH
a	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	0 0 1	D 7	35	Y	D 0 0 6	
b								
c								
d								

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref. Guidebook No. 31
Emergency Phone No. (810) 348-7510

K. Handling Codes for Wastes Listed Above: a/ b/ c/ d/

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled/placarded and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: J. M. E. CHARTIER — Signature: [signature] — Month / Day / Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: TOM BERTRAM — Signature: [signature] — Month / Day / Year

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name — Signature — Month / Day / Year

19. Discrepancy Indication Space

FAX REPORTING TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM (PEAS) 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND TO THE NATIONAL RESPONSE CENTER 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 1007

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail to Attn William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain Ct 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723608

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-837

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	75	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
NET WT: 46940
23 TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
153128 TB

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 11 14 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: LINWOOD OSTERLAND
Signature: Linwood Osterland
Date: Month Day Year: 11 14 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
TA M.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN 0-252-4706 OR OUT OF STATE AT 517 373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969
Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, PA 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10008
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Mail to Attn William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723609
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone: 810-725-837

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
NET WT. 57460
29 TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
153125

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E Chaperon — Signature: John E. Chaperon — Date: Month Day Year: 11 14 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year: 11 14 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space
7A X.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Burt — Signature: [illegible] — Date: Month Day Year: 11 14 94

GENERATOR — TRANSPORTER — FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10009
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Mailto Atty William Cuevarra
The Stanley Works
1000 Stanley Drive
New Britain Ct 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723610
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone: 810-725-837
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET WT: 61360
31 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
153169

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 11 14 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ROY PERTRAM — Signature: [signature] — Date: Month Day Year: 11 14 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space
7A 0F

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brunz — Signature: [signature] — Date: Month Day Year: 11 14 5

GENERATOR / TRANSPORTER / FACILITY

EPA Form 8700-22 (Rev. 9/88)

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 | Manifest Document No. 1 0 0 6

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powderville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain Ct 06053

A. State Manifest Document Number MI 3723611

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: M I D 0 0 6 5 5 8 2 2 5

C. State Transporter's ID

D. Transporter's Phone 810-725-83

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1

G. State Facility's ID

H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vol	I. Waste No.
GENERATOR a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	15	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # IIC994-MZ
NET WT. 57580 LBS TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
15374

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON | Signature: John E. Chaperon | Date: Month Day Ye 1/11/49

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: LINWOOD OSTERLIND. | Signature: Linwood Osterlind | Date: Month Day Ye 1/1/49

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Ye

FACILITY

19. Discrepancy Indication Space
TA Bund

20 Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Thomas Burz | Signature: TB | Date: Month Day Ye 1/1/45

ALL S... MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN ... JAN AI 1 NO 292-4706 OR OUT OF STATE AT 517-373 7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

PR 51

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64 1979, as amended and Act 136 P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID091242991 Manifest Document No. 001 1

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Pevlonville, MI 48836
Generator's Phone #

Attn: William Cameron
The Stanley Works
1000 Stanley Drive
New Britain, CT 06053

A. State Manifest Document Number MI 3723612

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone 810-725-837

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	15	Y	F006
b.						
c.						
d.						

GENERATOR

J. Additional Descriptions for Materials Listed Above
Approval # 116774-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET WT. 41000 2 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
153176

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON Signature: John E. Chaperon Date: Month Day Year 1/1/1449

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: MIKE MILLER Signature: Mike Miller Date: Month Day Year 1/1/1449

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Date: Month Day Year

FACILITY

19 Discrepancy Indication Space
Full

20 Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: THOMAS BURT Signature: Date: Month Day Year 1/1/1449

ALL SPILL CENTER # TO BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICH 1-800-424-8802 24 HOURS PER DAY.

YOU OR OUT OF STATE AT 517/373-7660 AND THE NATIONAL RESPONSE

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

~~DO~~ NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 1979, as amended and Act 136 1969

Failure to file is punishable under section 299.548 MCL or Section Act 136, P.A. 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10012
2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail to Attn William Guerrero
The Stanley Works
1000 Stanley Drive
New Britain Ct 06053

4. Generator's Phone

A. State Manifest Document Number MI 3723613
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone 810-725-8

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	35	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110995-M2
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153299

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Linwood OSTERLAND
Signature: Linwood Osterland
Date: Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space ENVOTECH RECEIVED 56720LBS AT 2E TO N

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr
Signature
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-... OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64 1979 as amended and Act 136, PA 1969

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, PA. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10013

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

4. Generator's Phone

Mail to Attn William Guerrero
The Stanley Works
[illegible]
[illegible] 06053

A. State Manifest Document Number MI 3723614

B. State Generator's ID

5. Transporter 1 Company Name
M.L. Chartier

6. US EPA ID Number MID006558225

C. State Transporter's ID

D. Transporter's Phone 810-725-837

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	[illegible]	Y	F006
b.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110775-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153303

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 11 11 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MIKE DELOR
Signature: Mike Delor
Date: Month Day Year 11 16 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space ENVOTECH RECEIVED 46640 LBS AT 23 TON
7A [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JAMES M COMES Jr
Signature: [signature]
Date: Month Day Year 11 16 9

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS TO BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-[illegible]4708 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, 1969.
Failure to file is punishable under section 299.548 MCL or Section Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 100 14
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Phone
Attn: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

A. State Manifest Document Number MI 3723615
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone 810-725-837
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (313)699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	35	Y	P006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110794-112
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153304

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 11 16 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy Reztum
Signature: Roy Reztum
Date: Month Day Year: 11 16 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space: ENVOTECH RECEIVED 51820 LBS AT 26 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr
Signature:
Date: Month Day Year: 11 16 94

GENERATOR / TRANSPORTER / FACILITY

EPA Form 8700-22 (Rev. 9/88) PR 5110

TSDF COPY

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under Sec. 11148, Part 111, MCL 324.11148 of Act 64, P.A. 1979 and Sec. 19 of Act 136, P.A. 1969

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST	1 Generator's US EPA ID No. MIDO991242919	Manifest Document No. 010115	2 Page 1 of 1	Information in the shaded areas is not required by Federal law.

3 Generator's Name and Mailing Address: Stanley Tools, 425 Frank Street, Fowlerville, MI 48836

Attn: William Guerra, 1000 Stanley Works Drive, New Britain, Ct 06053

4 Generator's Phone: (517) 223-3022

A State Manifest Document Number: MI 3723616

B State Generator's ID:

5 Transporter 1 Company Name: M.E. Chartier

6 US EPA ID Number: MID065582225

C State Transporter's ID:

D Transporter's Phone: 810-725-8311

7 Transporter 2 Company Name:

8 US EPA ID Number:

E State Transporter's ID:

F Transporter's Phone:

9 Designated Facility Name and Site Address: Michigan Disposal, Inc., 49350 N. I-94 Service Drive, Belleville, MI 48111

10 US EPA ID Number: MID000724831

G State Facility's ID:

H Facility's Phone: (313) 697-1120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12 Containers No.	Type	13 Total Quantity	14 Unit Wt/Vol	I Waste No	N/H
a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	35	Y	F006	H
b.								
d.								

J Additional Descriptions for Materials Listed Above: Approval # 10992MZ

Ref. Outline Book No. 21

Emergency Phone No. (810) 248-3010

K Handling Codes for Wastes Listed Above: a) T1 b) T1 c) T1 d) T1

15 Special Handling Instructions and Additional Information:

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

If export shipment and I am a primary exporter, I certify that the provisions of the consent of the importing country to which the waste is to be exported have been met, and I have a written consent from the country of import to the receipt of the waste. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Printed/Typed Name: J.M. Guerra

Signature: [signature]

Month: 11 Day: 18 Year: 87

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name:

Signature:

Month: Day: Year:

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:

Signature:

Month: Day: Year:

19 Discrepancy Indication Space

20 Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name:

Signature:

Month: Day: Year:

GENERATOR

THIS REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM IN MICH

IF SHIPPED OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969. Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type. Form Approved. OMB No. 2050-0039, Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 10016
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone

Attn: William Cuerena
The Stanley Works
1000 Stanley Drive
New Britain, Ct. 06053

A. State Manifest Document Number: MI 3723617
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone: 810-725-8373
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (810)599-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	35	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #: 110994-HZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ 1
b/ 1
c/ 1
d/ 1

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon — Signature: John E. Chaperon — Date: 11/16/94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Mike [illegible] — Signature: [illegible] — Date: 11/16/94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date

19. Discrepancy Indication Space

GENERATOR

DISTRIBUTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type. Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10017
2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
ATTN: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct. 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723618
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone: 810-725-8374
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (313) 699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	35	Y	F006	H
b.								
c.								
d.								

GENERATOR

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John B. Chaperon Signature: John C. Chaperon Date: 11/16/94

17. Transporter's Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy Bertram Signature: Roy Bertram Date: 11/16/94

18. Transporter's Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Date

19. Discrepancy

ALL SPILLS ARE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN 1-800-2 ... OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE ... HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10018

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn William Guerrero
The Stanley Works
Stanley Drive
[illegible]

A. State Manifest Document Number MI 3723619

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone 810-725-8373

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110794 MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153378

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year 11 17 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Mike Delor
Signature: Mike Delor
Date: Month Day Year 11 17 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space ENVOTECH RECEIVED 50040 LBS AT 25 TON
8B X.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: James M Combs Jr
Signature
Date: Month Day Year 11 17 94

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN CENT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10019

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn: William Guerrera
The Stanley Works
[illegible] Drive
[illegible]

4. Generator's Phone

A. State Manifest Document Number: MI 3723620

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110974-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153379

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 11 17 9[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Linwood OSTERLAND
Signature: Linwood Osterland
Date: Month Day Year: 11 17 9[illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space ENVOTECH RECEIVED 62660 LBS AT SITON
8B 2.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James R. Combs Jr.
Signature
Date: Month Day Year: 11 17 9[illegible]

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICH[illegible] AT 1 800 [illegible] OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT [illegible]-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 5, 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10020

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone

Attn: William Cuccarca
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

A. State Manifest Document Number: MI 3723621

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-837

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	[illegible]	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153380

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 11 17 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year: 11 17 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space: ELDOTECH RECEIVED 61720 LBS AT 31 TON

GB X.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year: 11 17 9

GENERATOR

TRANSPORTER

FACILITY

ALL SPILL MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-[illegible] OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, PA. 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 100 21

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone ( )
Attn. William Guerrera
The Stanley Works
1000 Stanley Drive
N. Britain, Ct 06053

A. State Manifest Document Number MI 3723622

B. State Generator's ID

5. Transporter 1 Company Name M.L. Chartier

6. US EPA ID Number MID006558225

C. State Transporter's ID

D. Transporter's Phone 810-725-8373

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
1534A

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determin to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes t present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my was generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name John E. CHAPERON
Signature John E. Chaperon
Date Month Day Y 11 17 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Mike Delo
Signature Mike Delo
Date Month Day Y 11 17 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Y

19. Discrepancy Indication Space INVOTECH RECEIVED 45680 LBS AT 23+00
SA
BWH

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name James M Combs Jr
Signature
Date Month Day Y 11 17

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1 800 ... 4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1 800 424 8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 5[illegible] 1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 1[illegible] Act 136, PA 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 100 22

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3723623

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-837[illegible]

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	[illegible]	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 115794-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153413

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 11 17 9[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: LINWOOD OSTERLAND
Signature: Linwood Osterland
Date: Month Day Year: 11 17 9[illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space: ENVOTECH RECEIVED 51580 LBS AT 26 TON
SA Burr

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN 800 [illegible] OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 34, 1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10023
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn William Guerrero
The Stanley Works
1000 Stanley Drive
New Britain, CT 06053

A. State Manifest Document Number: MI 3723624
B. State Generator's ID:

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID:
D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	135	Y	F006	P
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110774-HZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153431

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 11 17 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: LINWOOD OSTERLAND — Signature: Linwood Osterland — Date: Month Day Year: 11 17 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year:

19. Discrepancy Indication Space
MDI Recovery 59800 # @ 2770

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: EDWARD MUL — Signature: [signature] — Date: Month Day Year: 11 17 94

GENERATOR

TRANSPORTER

FACILITY

ALL SPIC[illegible] MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MI[illegible] AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 00-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10024
2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

4. Generator's Phone

A. State Manifest Document Number: MI 3723625

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154430

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 11 17 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MIKE DELOR — Signature: Mike Delor — Date: Month Day Year: 11 17 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space
MDI Received 52940 [signature] 26 TO

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MOW — Signature: [signature] — Date: Month Day Year: 11 17 94

GENERATOR

TRANSPORTER

FACILITY

MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN AN AT 1 ... 1/06 OR OUT OF STATE AT 517 373 7660 AND THE NATIONAL RESPONSE CENTER 1-800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10028
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

4. Generator's Phone

Attn William Guerrera
The Stanley Works
1000 Stanley Drive
[illegible]

A. State Manifest Document Number: MI 3723629
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: 810-725-837[illegible]
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558228
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110774-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153545

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 11 21 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space
8 Rec Received 61820# @ 31 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MULL
Signature: [signature]
Date: Month Day Year: 11 21 94

GENERATOR / TRANSPORTER / FACILITY

ALL CENT MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN [illegible] 1-800-424-8802 24 HOURS PER DAY. [illegible] 282-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

EPA Form 8700-22 (Rev. 9/88)
PR 5110 Rev. 10/9[illegible]

TSDF COPY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10, Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10029
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn: William Guerrera
The Stanley Works
[illegible] Drive
New Britain, CT 06053

A. State Manifest Document Number: MI 3723630
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: 810-725-837[illegible]
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110774-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153583

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 1/2/94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: LINWOOD OSTERLAND — Signature: Linwood Osterland — Date: Month Day Year: 1/2/94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year:

19. Discrepancy Indication Space: ENVOTECH RECEIVED 58670 LB AT ZEISON
8B CJS

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Coors Jr. — Signature: [signature] — Date: Month Day Year: 1/2/94

GENERATOR — TRANSPORTER — FACILITY

[illegible] OR OUT OF STATE AT 517 373-7660 AND THE NATIONAL RESPONSE [illegible] 1-800 [illegible] MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN [illegible] 424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20031
2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

A. State Manifest Document Number: MI 3723665
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: 810-725-837
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	30	Y	P006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110774-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153584

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month 11 Day 21 Year 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Mike Delor
Signature: Mike Delor
Date: Month 11 Day 21 Year 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space: ENVOTECH RECEIVED 49340 LS AT 25 TON
8B CJS BMP

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr
Signature:
Date: Month 11 Day 21 Year 9

GENERATOR / TRANSPORTER / FACILITY

ALL SHIPS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)
PR 5110 Rev. 10

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200032
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Ata William Guerrero
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723666
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone: 810-725-837

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	DV	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110974-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. 153557

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 11 21 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Ray BERTRAM
Signature: Ray Bertram
Date: Month Day Year: 11 21 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
8B

20. Facility Owner or Operator. Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: K Bowers
Signature: K Bowers
Date: Month Day Year: 11 21 9

GENERATOR / TRANSPORTER / FACILITY

ALL CENTERS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-424-8802 24 HOURS PER DAY. 1-800-424-8802 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

EPA Form 8700-22 (Rev. 9/88)

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 54, 1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20033

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn William Guerrero
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

4. Generator's Phone

A. State Manifest Document Number MI 3723667

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone 810-725-8373

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	30	Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 116994-MZ
Ref: Guidebook No. 31 153589
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 11/21/94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year 11/21/94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
9B CJS BMP

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: [signature]
Date: Month Day Year 11/21/94

GENERATOR

TRANSPORTER

FACILITY

ACCESS SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-[illegible]-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER / 1-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 200 34
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn: William Guerrera
The Stanley Works
[illegible]
[illegible] Ct 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723668
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone: 810-725-837

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	30	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110991-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153602

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 11 21 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: LINWOOD OSTERLAND — Signature: Linwood Osterland — Date: Month Day Year: 11 21 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space
MDI Received 55980 [illegible] TON
70

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD [illegible] — Signature: [signature] — Date: Month Day Year: 11 21 94

GENERATOR — TRANSPORTER — FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN [illegible] AT [illegible] 4708 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 54, 1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20035

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain Ct 06053

4. Generator's Phone

A. State Manifest Document Number MI 3723669

B. State Generator's ID

5. Transporter 1 Company Name M.L. Chartier

6. US EPA ID Number MID006558225

C. State Transporter's ID

D. Transporter's Phone 810-725-8373

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110771-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

153603

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 11 Day 21 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MIKE DELIK
Signature: Mike Delik
Date: Month 11 Day 21 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
MDI Receipt # 55960 # 0 25 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MULLE
Signature
Date: Month 11 Day 21 Year 94

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY.

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 | Manifest Document No. 20036

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723670

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-837

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT		Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110791-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153605

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON | Signature: John E. Chaperon | Date: Month 1 Day 1 Year 91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible] PORTEAM | Signature | Date: Month 1 Day 2 Year 91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

19. Discrepancy Indication Space
MDI Received 60 Drums 30 TOT

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: EDWARD MULL | Signature | Date: Month 1 Day 2 Year 91

ALL S... MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN A... CAN AT ... 992-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTE... 1-800-424-8802 24 HOURS PER DAY.

GENERATOR | TRANSPORTER | FACILITY

EPA Form 8700-22 (Rev. 9/88)

PR 511

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200811
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Mail To: William Guererra
Stanley Tools
425 Frank Street
Powderville, MI 48836
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457069
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	2	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET WT. 4172016
2 TON

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information
15452

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 12 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Paul Hackworth
Signature: Paul Hackworth
Date: Month 12 Day 13 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
SB-S.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Thomas Bury
Signature:
Date: Month 12 Day 13 Year 94

EPA Form 8700-22 (Rev. 9-88)
PA 5110
Rev. 10/92

TEAR COPY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20082
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powderville, ME (48836)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457070
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID: 421485
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00020	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
NET WT. 29380
15 TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. 15T508

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date (Month Day Year)
John E. CHAPERON	John E. Chaperon	

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Chuck Tyers	Chuck Tyers	11 13 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

19. Discrepancy Indication Space
SB-89.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
Thomas Brown		11 21 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110
Rev. 10/92

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1969.
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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200 883
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone ( )

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457071
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID: 621465 NY
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12 Containers No	Type	13 Total Quantity	14 Unit Wt/Vol	I. Waste No.	N/H
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	00021	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET WT. 35620
20 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

104 154526

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 17 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Branham
Signature: Richard Branham
Date: Month Day Year: 12 18 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
SB-[illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Thomas Brunty
Signature: [illegible]
Date: Month Day Year: 12 13 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110
Rev. 10/92

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200 92
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Bowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457080
B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12 Containers No	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.	N/H
a X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b							
c							
d							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154 652

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

J.E.C.

Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brouchard
Signature: Rich C Brouchard
Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
8B-42[illegible]-02

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name
Signature
Date: Month Day Year

GENERATOR
TRANSPORTER
FACILITY

EPA Form 8700-22 (Rev. 9/88)
PR 5110 Rev. 10/92

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MTD099124299 — Manifest Document No. 20093

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powerville, MI 48836
Phone

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457081

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MTD000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12 Containers No	Type	13 Total Quantity	14 Unit Wt/Vol	I. Waste No.	N/H
a	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	12	Y	F006	H
b								
c								
d								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154646

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jeffrey E. CHAPERON — Signature — Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Herb — Signature — Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space
NET 2470

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: EDWARD M — Signature — Date: Month Day Year: 10/14/94

EPA Form 8700-22 (Rev. 9/88)

PR 5110

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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Required under authority of Act 64, PA 1979, as amended and Act 136, PA 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 Manifest Document No.: 20094

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
Stanley Tools
425 Frank Street
Powlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457082

B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID: 621485

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID:

H. Facility's Phone: (313)699-7120

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER)	HM		12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	[illegible]	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
157645
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

J.E.C. 12/14/94

Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 12 14 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year: 12 14 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space
8B-37550.F @ 19 TO

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARDS M
Signature:
Date: Month Day Year: 12 14 94

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Form Approved. OMB No. 2050-0039 Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20121

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number MI 4103815

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID 62148 5

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET - 33360
17TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

154683

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 15 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month 12 Day 15 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
JA - [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brunt
Signature: [illegible]
Date: Month 12 Day 15 Year 94

EPA Form 8700-22 (Rev. 9/88) PR 5110

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

7

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Form Approved. OMB No. 2050-0039 Expires 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 201212
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone ( )

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 4103816
B. State Generator's ID

4. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone 800-685-0670

5. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	[illegible]	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110594-MZ
20 TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510 VET-35220

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
15768Y

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 10 Day 15 Year 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brantley
Signature: Richard Brantley
Date: Month 10 Day 15 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space
8A-39.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Burns
Signature
Date: Month 10 Day 15 Year 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979, as amended and Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20124
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 4103818
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET WT 29020
15 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

154686

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR: if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month 12 Day 15 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month [illegible] Day [illegible] Year [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
3A - 2.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Thomas Bruns
Signature: [illegible]
Date: Month 12 Day 15 Year 94

EPA Form 8700-22 (Rev. 9/88) PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20125
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103819
B. State Generator's ID:

4. Generator's Phone:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET - 42260
21 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
15 Y 645

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR: if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 15 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
BA CJS [illegible]

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brunty
Signature: [illegible]
Date: Month 12 Day 15 Year 94

EPA Form 8100-22 (Rev. 9/88)
PR 5110 Rev. 10/94

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20076
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Phone

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 3457064
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809512
C. State Transporter's ID
D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
GENERATOR a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	28880	Y	D006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET - 28880 14 TON

K. Handling Codes for Wastes Listed Above
a/ 1
b/ 1
c/ 1
d/ 1

15. Special Handling Instructions and Additional Information
154820

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

	Printed/Typed Name	Signature	Date (Month Day Year)
GENERATOR	John E. CHAPERON	John E Chaperon	12 12
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials		
			12 12
	18. Transporter 2 Acknowledgement of Receipt of Materials		
FACILITY	19. Discrepancy Indication Space		
	20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.		
	Thomas Burns		12 19

EPA Form 8700-22 (Rev. 9/88)

...292-4706 OR OUT OF STATE AT 517/373-7660 AND THE NATIONAL RESPONSE ...HIGAN A... ...S MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM AT 1-800-424-8802 24 HOURS PER DAY. ...AL ...CE

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under Authority of Act 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20116
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 4103809

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET - 42320
21 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154876

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month 12 Day 17 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Brenda A Supp
Signature: Brenda A Supp
Date: Month 12 Day 15 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
7B-[illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brown
Signature: [illegible]
Date: Month 12 Day 20 Year 94

GENERATOR

TRANSPORTER

FACILITY

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 2 Manifest Document No. 0 1 1 7

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 4103810

B. State Generator's ID

4. Generator's Phone ( )

5. Transporter 1 Company Name
Buffalo Fuel Corp.

6. US EPA ID Number N Y D 0 5 1 8 0 9 9 5 2

C. State Transporter's ID

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number M I D 0 0 0 7 2 4 8 3 1

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	0 0 1	D T	0 0 2 1	Y	F 0 0 6
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
22 TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510 NET - 44340

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154825

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Date (Month Day Year)
JOHN E. CHAPERON	John E. Chaperon	11 12 94

17. Transporter 1 Acknowledgement of Receipt of Materials		
Printed/Typed Name: TROY A FRITCH SR.	Signature	Date: 11 12 94

18. Transporter 2 Acknowledgement of Receipt of Materials		
Printed/Typed Name	Signature	Date (Month Day Year)

19. Discrepancy Indication Space
68 #

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
Thomas Burg		11 15 94

EPA Form 8700-22 (Rev. 9/88)

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1969.
Failure to file is punishable under section 299.548 MCL or Section 10 c Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20118

2. Page 1 of

Information in the shaded are is not required by Fede law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number MI 4103812

B. State Generator's ID

5. Transporter 1 Company Name
Buffalo Fuel Corp.

6. US EPA ID Number NYD051809952

C. State Transporter's ID

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
NET-38200
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
19 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154821

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name John E. CHAPERON
Signature John E. Chaperon
Date Month Day Ye 12 19 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Richard W Branham
Signature Richd W Branham
Date Month Day Ye 12 19 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Ye

19. Discrepancy Indication Space
SB

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Thomas Bunz
Signature
Date Month Day Ye 12 19 9

GENERATOR

TRANSPORTER

FACILITY

ALL MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, AT 1-800-424-8802 24 HOURS PER DAY

MICHIGAN AT 292 4706 OR OUT OF STATE AT 517/373-7660 AND THE NATIONAL RESPONS.

EPA Form 8700-22 (Rev. 9/88)

PR 511 Rev. 1

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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Required under authority of Act 64, P 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 0119

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 4103813

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET - 43840
22 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154822

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 11 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: Steven Chandler
Date: Month Day Year: 12 11 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
SB mio

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 1979, as amended and Act 136, P 1969.

Failure to file is punishable under section 299.548 MCL or Section 1 Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expire

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299201 2 8 — Manifest Document No.

2. Page 1 of 1

Information in the shaded a is not required by Fe law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103814

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-06

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET - 34560
17TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154803

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determ to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my w generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month Day 12 11

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Donald L. Lambert — Signature: Donald L. Lambert — Date: Month Day 12 11

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day

19. Discrepancy Indication Space
SB

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brown — Signature: [signature] — Date: Month Day 12 19

GENERATOR

TRANSPORTER

FACILITY

ALL SP UST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MIC AT 1 800 1/06 OR OUT OF STATE AT 517 373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20123

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103817

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00071	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510 NET - 41120

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154824

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 11 17 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: BRENDA A SUPPA
Signature: Brenda A Suppa
Date: Month Day Year 12 19 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
PB
BIV

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Thomas Bruntz
Signature: [signature]
Date: Month Day Year

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969
Failure to file is punishable under section 299.548 MCL or Section 10 c Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20103
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Bowlerville, MI 48836
Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457092
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	[illegible]	Y	F006	B
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154967

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 22 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: GLENDA A SUPPA
Signature: [illegible]
Date: Month Day Year: [illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
MDI RECEIVED 44260 LDS MT 22 TON
SB [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James W Comes Jr
Signature
Date: Month Day Year: 12 22 94

GENERATOR / TRANSPORTER / FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM AT 1-800-424-8802 24 HOURS PER DAY. MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

EPA Form 8700-22 (Rev. 9/88)
PR 5110

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979 as amended and Act 136 P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. H I D 0 9 9 1 2 4 2 9 9 | Manifest Document No. 2 0 1 0 7

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address: Mail To: William Guererra

Stanley Tools
425 Frank Street
Fowlerville, MI 48836

The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

Generator's Phone ( )

A. State Manifest Document Number: MI 3457097

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: N Y D 0 5 1 8 0 9 9 5 2

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	0 0 1	D T	[illegible]	Y	F 0 0 6
b.							
d.							

J. Additional Descriptions for Materials Listed Above

Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

15490

K. Handling Codes for Wastes Listed Above

a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

		Date
Printed/Typed Name: JOHN E. CHAPERON	Signature: John E. Chaperon	Month Day Year: 11 21 94

17. Transporter 1 Acknowledgement of Receipt of Materials

		Date
Printed/Typed Name: Steven Chandler	Signature: [signature]	Month Day Year: 11 21 94

18. Transporter 2 Acknowledgement of Receipt of Materials

		Date
Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

TB CJS [illegible] 40540 # a 20 Ton

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

		Date
Printed/Typed Name: Edward M—	Signature	Month Day Year: 12 2 94

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MI 800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10, Act 136, P.A. 1969.

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20108
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powtenville, MI (48836)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457098
B. State Generator's ID:
C. State Transporter's ID: 62148
D. Transporter's Phone: 800-685-0670
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00001	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET-31620
16 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154897

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 20 96

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year: 12 20 96

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space
7BC55 [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brenz
Signature: [illegible]
Date: Month Day Year: 1 7

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS CENTER 0-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1969
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Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MIDD991242929 Manifest Document No. 2011 00
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Bowdenwillen MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 3457099
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006
b.							
c.							
d.							

GENERATOR

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
15984

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month 12 Day 20 Year 11

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Donald L Lambert
Signature: Donald L. Lambert
Date: Month 12 Day 20 Year 11

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
TBE 44,400 # 0 21 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Brian Miller
Signature
Date: Month 12 Day 20 Year 11

Form 8700-22 (Rev. 9/88)
PRS110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 2011 0

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 4103803

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	F
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET - 44260
22 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154568

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E Chaperon
Date: Month 12 Day 20 Year 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard W Brayham
Signature: Rod C. B[illegible]
Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
~~Wt~~ 8B BMP

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brunts
Signature: [illegible]
Date: Month 12 Day 21 Year 95

GENERATOR

TRANSPORTER

FACILITY

ALL SPEC MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM IN MICHIGAN AT 1-800-1700 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20115
2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 4103808

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID: 62148 S

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

NET - 33340
17 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

154879

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 20 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year: 12 20 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
7B - DS.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

CENTER AT 1-800-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 Manifest Document No. 2 0 1 0 1

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 3457089

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: N Y D 0 5 1 8 0 9 9 5 2

C. State Transporter's ID

D. Transporter's Phone 800-685-067

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1

G. State Facility's ID

H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	0 0 1	D	[illegible]	Y	F 0 0 6
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
155190

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 13 Year 7[illegible]

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard W Branham
Signature:
Date: Month 1 Day 17 Year 7[illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space
18 SC Pkg Gr III/PG TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD Mon
Signature:
Date: Month 12 Day 27 Year 9[illegible]

GENERATOR

...AT 1-800-... 4706 OR OUT OF STATE AT 517 373-7660 AND THE NATIONAL RESPONSE ...

...ST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MI ... 30-424 8802 24 HOURS PER DAY

...CENTER

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 5 1979 as amended and Act 136 of 1969.

Failure to file is punishable under section 299.548 MCL or Section 1 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: MID099124299 / 01102
2. Page 1: 1
Information in the shaded are is not required by Fede law.

3. Generator's Name and Mailing Address:
Stanley Tools
425 Frank Street
Powderville, MI 48836
Phone

Mail To: William Guerrra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457090
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-067

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
GENERATOR a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	00002	Y	F006
b.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153/145

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Date (Month Day Year)
John E. CHAPERON	John E. Chaperon	1 2 1 7 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Donald L. Lambert	Donald L Lambert	1 2 1 7 94

18 Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

19. Discrepancy Indication Space
NOV 37229 # 0 1970

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
Edward Mu		1 2 2 7 94

FACILITY

...ISION OF THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, as ... N AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE 800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT
OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64 1979 as amended and Act 136 P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 201 04
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Bowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457094
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	2	Y	F006
b.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155143

K. Handling Codes for Wastes Listed Above
a/ / b/ / c/ / d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Date (Month Day Year)
John E. CHAPERON	John E. Chaperon	12 12 19

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Kevin Chandler		12 12 19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space
16 PL
MD1 RECEIVED 50180 LBS AT 25TON
Barn

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
		12 27 9

YOU MUST USE THIS FORM TO COMPLY WITH FEDERAL REGULATIONS. FAILURE TO DO SO MAY RESULT IN A FINE OF UP TO $25,000 PER DAY. KEEP A COPY FOR YOUR RECORDS. TYPE OR PRINT IN INK. SEE INSTRUCTIONS ON REVERSE. IF MORE THAN ONE HAZARDOUS WASTE IS LISTED, USE CONTINUATION SHEET (EPA FORM 8700-22A). IF YOU NEED TO FAX THIS MANIFEST AND YOU HAVE ACCESS TO A FAX MACHINE, YOU MAY FAX IT TO YOUR DESIGNATED FACILITY. YOU MUST THEN MAIL THE ORIGINAL SIGNED MANIFEST TO THE FACILITY. KEEP A COPY FOR YOUR RECORDS. IF YOU RECEIVE A REJECTED LOAD OR DISCREPANCY EXISTS, YOU MUST SUBMIT A REVISED MANIFEST. FOR ASSISTANCE CALL RCRA/SUPERFUND HOTLINE AT 800-424-9346 OR IN WASHINGTON, DC AREA 703-412-9810. TDD HEARING IMPAIRED 800-553-7672 OR IN WASHINGTON, DC AREA 703-486-3323.

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 01105

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI (48836)

Mail To: William Goererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 3457095

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/I
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	00021	Y	F006	R
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

55164

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 07 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Bradbury
Signature: Richard Bradbury
Date: Month Day Year 12 12 1994

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space
NET 41100 # Faulty

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD M
Signature:
Date: Month Day Year 12 12 94

EPA Form 8700-22 (Rev. 9/88)

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM AT 1-800-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 01 06
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI (48836)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457096
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	CNKRV	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
155146

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 12 27 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Paul Hackworth
Signature: Paul Hackworth
Date: Month Day Year:

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space: MDI RECEIVED 44960 LBS AT 22 TON
TB PK
Bill

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Comes Jr
Signature:
Date: Month Day Year: 12 27 94

GENERATOR
TRANSPORTER
FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-[illegible]-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 2 0 0 5 3
Manifest Document No.
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number MI 3723689

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: N Y D 0 5 1 8 0 9 9 5 2
C. State Transporter's ID
D. Transporter's Phone 800-685-067

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1
G. State Facility's ID
H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	0 0 1	D T	0 0 0 1 2 1	Y	F 0 0 6
b.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
53142

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 11 Day 21 Year 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Scott A. Fritch
Signature: Scott A. Fritch
Date: Month 11 Day 21 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NET 1670 LBS

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month 12 Day 7 Year 94

GENERATOR

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MI 800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P 1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 200577
2. Page 1 of 1
Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Sowderville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3723693
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID: 62148
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
GENERAL a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	00121	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
155138

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Month Day Year: 12-27-94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Month Day Year: 12 27 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

FACILITY

19. Discrepancy Indication Space: M.D.I. RECEIVED 29360 AT ISTOW

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name:
Signature:
Month Day Year:

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM IN MICHIGAN 800-292-4706 OR CALL AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20111
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103804
B. State Generator's ID:
4. Generator's Phone ( )

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/T
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510 155144

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month 12 Day 27 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Troy A Fritch Sr.
Signature: [signature]
Date: Month 12 Day 27 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
PA TB
Bml

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Comes Jr
Signature: [signature]
Date: Month 12 Day 27 Year 94

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN AND CENTER 800-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20128
2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103826

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155169

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 27 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: [signature]
Date: Month Day Year 12 27 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NET 42560#0 2T TB

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: [signature]
Date: Month Day Year 12 27 94

GENERATOR

TRANSPORTER

FACILITY

WHEN SPILLS CENTER AT 424-8802 24 HOURS PER DAY. TO BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN ... OR OUT OF STATE AT 517 373 7660 AND THE NATIONAL RESPONSE

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: M I D 0 9 9 1 2 4 2 9 9 2 0 1 2 9

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
(Generator's Phone)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103827

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: N Y D 0 5 1 8 0 9 9 5 2

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	I. Waste N/H
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	00021	Y	F006	H
b.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155/68

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Date (Month Day Year)
John E. CHAPERON	John E. Chaperon	10 27 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Paul Hackworth	Paul Hackworth	10 27 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

19. Discrepancy Indication Space
NET 37080 # @ 19 BD

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
William M		10/27/94

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20130

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI - 4103828

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID 62148

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155163

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 10 27 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year: 10 27 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NET 34760 # @ 17 [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD M[illegible]
Signature: [illegible]
Date: Month Day Year: 10 27 94

GENERATOR

TRANSPORTER

FACILITY

1-800-2[illegible] OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

[illegible] BE REPORTED [illegible] THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN [illegible] 424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299201 31
Manifest Document No.:
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 4103829

B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952

C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155/66

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 01 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Donald L Lambert
Signature: Donald L Lambert
Date: Month Day Year: 12 01 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space
NET 38480 [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDUARDO M
Signature:
Date: Month Day Year: 12 03 94

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20125

2. Page 1 of 1

Information in the shaded ar is not required by Fede law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powlerville, MI 48836

4. Generator's Phone ( )

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 4103824

B. State Generator's ID

5. Transporter 1 Company Name
Buffalo Fuel Corp.

6. US EPA ID Number NYD051809952

C. State Transporter's ID

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number MIDO00724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

15 196

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. CHAPERON | Signature: John E. Chaperon | Date: Month 10 Day 08 Ye 96

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Richard Bradham | Signature: Richard Bradham | Date: Month 10 Day 21 Ye 96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Ye

19. Discrepancy Indication Space
84 1B 3680# @ 1810

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Edward Mu | Signature | Date: Month 10 Day 21 Ye 96

TRANSPORTER

FACILITY

GENERATOR

DESIGNATED FACILITY

CENTER

310-424-8802 24 HOURS PER DAY.

...06 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE ...

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20127

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 4103825

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155198

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 28 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Donald L Lambert
Signature: Donald L. Lambert
Date: Month Day Year: 12 28 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
8 Mpk
WEP 47340 # 02410

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: G M
Date: Month Day Year: 12 28 94

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended, and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20133

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 4103831

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	[illegible]	Y	F006	H
b							

Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155197

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 28 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Paul Hackworth
Signature: Paul Hackworth
Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
Not 37800 # Q Pitor

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Edward M
Signature
Date: Month Day Year 12 28 94

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

...1969, as amended and Act ... P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MIDO99124299 — Manifest Document No. 20135

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Rodeyville, MI 48836
Generator's Phone

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103832

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID: 621485

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724811

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	
a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	22021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

15584

K. Handling Codes for Wastes Listed Above

a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERUN — Signature: John E. Chaperun — Date: Month 12 Day 08 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Chuck Myers — Signature: Chuck Myers — Date: Month 12 Day 08 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space M.D.I. RECEIVED 30180 LBS AT 15 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: James M Lewis Jr — Signature — Date: Month 12 Day 12 Year 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 2015 6
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Poulerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103833
B. State Generator's ID:

4. Generator's Phone
5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b							
c							
d							

15. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155206

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

16. Special Handling Instructions and Additional Information

17. GENERATOR'S CERTIFICATION. I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 28 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Scott A. Fritch
Signature: Scott A. Fritch
Date: Month Day Year 12 28 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
8A 42600 # 0 21TO

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDUARD M
Signature:
Date: Month Day Year 12 28 94

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20134
2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 4103834
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/A
X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155 207

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 122894

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: [signature]
Date: Month Day Year: 122894

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
8A 44620 # 022 TO

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: [signature]
Date: Month Day Year: 122894

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 34, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 2 0 1 3 7

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 4103835

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID 67148 5

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510 155235

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 28 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year 12 28 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space MDI RECEIVED 31140 LBS AT 16 TON
8A CJS

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr
Signature
Date: Month Day Year 12 28 9

TRANSPORTER

FACILITY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20138
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103836
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	B
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
155245

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

16. Special Handling Instructions and Additional Information

17. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 12 28 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Donald L. Lambert
Signature: Donald L. Lambert
Date: Month Day Year: 12 28 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space MD RECEIVED 32900 LBS AT 16 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr
Signature
Date: Month Day Year: 12 28 94

EPA Form 8700-22 (Rev. 9/88)

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 20139

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103837

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

155246

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month 12 Day 28 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Paul Hackworth — Signature: Paul Hackworth — Date: Month 12 Day 28 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space MD1 [illegible] T 21400 LBS AT 11 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr — Signature — Date: Month 12 Day 28 Year 94

FORM 8700-22 (Rev. 9/88) PR 5110

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type. Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 Manifest Document No. 2 0 1 4 0

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Belleville, MI 48836
Generator's Phone ( )

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 4103838

B. State Generator's ID

4. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: N Y D 0 5 1 8 0 9 9 5 2

C. State Transporter's ID

D. Transporter's Phone 800-685-0670

5. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N.H
a. X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	0 0 1	D T	00021	Y	F 0 0 6	H
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
155243

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 05 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brayham
Signature: Richard Brayham
Date: Month 12 Day 05 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space MDI RECEIVED 26,500 LBS AT 13 TON
pay

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James A. Conos Jr
Signature:
Date: Month 12 Day 12 Year 94

TRANSPORTER

FACILITY

PR 51

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969
Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 20039
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn: W Hernandez
The Stanley Works
1000 Stanley Drive
New Britain, CT 06053

4. Generator's Phone

A. State Manifest Document Number MI 3723673
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone 810-725-837
E. State Transporter's ID

7. Transporter 2 Company Name: Ft. Fuel Corp.
8. US EPA ID Number: MIA0001819517
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	1	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110794-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154042

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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	Printed/Typed Name	Signature	Date (Month Day Ye)
GENERATOR	JOHN E. CHAPERON	John E. Chaperon	12 10 19
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials		
	S. Frith	Scott Frith	12 10 19
	18. Transporter 2 Acknowledgement or Receipt of Materials		
FACILITY	19. Discrepancy Indication Space: NET 37600 @ 1970		
	20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.		
	Printed/Typed Name	Signature	Date (Month Day Ye)
			12 20 19

ALL SI... MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN M... AN AT 1-800-424-8802 24 HOURS PER DAY. CENTER, ... 1-800-424-8802 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

EPA Form 8700-22 (Rev. 9/88)

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64 1979 as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 c Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID091242992 — Manifest Document No. 20404

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3723674

B. State Generator's ID:

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MID006558225

C. State Transporter's ID:

D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name: Griffin Fuel Corp

8. US EPA ID Number: MIN000151810715R

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID:

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	17	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154040

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year 1/21/19H

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Chuck Myers — Signature: Chuck Myers — Date: Month Day Year 1/21/19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space: MDI RECEIVED 39420 LBS AT 20 TON
FULL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: James M. Combs Sr — Signature: — Date: Month Day Year 1/21/19 94

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969

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Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20042
2. Page 1 of 1
Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn: Bill Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, CT 06053
4. Generator's Phone

A. State Manifest Document Number MI 3723676
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone 810-725-8373

7. Transporter 2 Company Name: Mid-State Fuel Co.
8. US EPA ID Number: MIA17511819919512
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
GENERATOR a.	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	21	Y	F006
b.							
c.							

J. Additional Descriptions for Materials Listed Above
Approval # 110991-HZ
19 TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET 38120

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154061

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Date Month Day Year
Julie E. CHAPERON	John E. Chaperon	1/12/01/9/14

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Fitch		1/1/1/

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
		/ / /

FACILITY

19. Discrepancy Indication Space
BB OF

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year
Thomas Burg		1/20/21/14

EPA Form 8700-22 (Rev. 9/88)

TSDF COPY

PA 5110 Rev. 10/9

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MIDO99124299 Manifest Document No. 200 43

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Generator's Phone

A. State Manifest Document Number MI 3723677

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier

6. US EPA ID Number: MIDO065582 25

C. State Transporter's ID

D. Transporter's Phone 810-725-837

Transporter 2 Company Name: Erb Envl Corp

8. US EPA ID Number: [illegible]

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00521	Y	F006
b.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval # 116974-MZ
154659
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 01 Ye 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month 12 Day 02 Ye 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Ye

19. Discrepancy Indication Space
80 47 80 24 TOR

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: EDWARD MU
Signature:
Date: Month 12 Day 02 Ye 91

GENERATOR — TRANSPORTER — FACILITY

ST 81 PHONED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 800-424-8802 24 HOURS PER DAY.

PO 51

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 6 1979 as amended and Act 136 P 1969

Failure to file is punishable under section 299.548 MCL or Section 1 Act 136, PA. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20044

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn: William Guerrera
The Stanley Works
1000 Stanley Drive
Fowler, MI 48836

4. Generator's Phone

A. State Manifest Document Number: MI 3723678

B. State Generator's ID

5. Transporter 1 Company Name: ~~M.L. Chartier~~

6. US EPA ID Number: ~~MID006558225~~

C. State Transporter's ID

D. Transporter's Phone: ~~810-725-837~~

7. Transporter 2 Company Name: [illegible]

8. US EPA ID Number: [illegible]

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110991-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET WT: 35160
18 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

15-4003

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 02 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Paul Hackworth
Signature: Paul Hackworth
Date: Month Day Year: 12 02 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
7 B DF [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brunt
Signature: [illegible]
Date: Month Day Year: 12 02 9

GENERATOR

TRANSPORTER

FACILITY

I BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1 800 ... OR OUT OF STATE AT 517 373-7660 AND THE NATIONAL RESPONSE

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 54, 1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, PA, 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200 46
2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone

Attn: William Guerrera
The Stanley Works
[illegible] Drive
[illegible]

A. State Manifest Document Number MI 3723680
B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
C. State Transporter's ID
D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name: [illegible]
8. US EPA ID Number: [illegible]
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	1
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
18 TON
35660 NET

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154064

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 02 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brauhan
Signature: Richard Brauhan
Date: Month Day Year: 12 02 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
7B DF BY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Bunz
Signature: [signature]
Date: Month Day Year: 12 02 94

GENERATOR

TRANSPORTER

FACILITY

CENTER 800-424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
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1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

* Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200047

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn William Guererra
The Stanley Works
[illegible] Stanley Drive
[illegible] 06053

A. State Manifest Document Number: MI 3723681

B. State Generator's ID

5. Transporter 1 Company Name: ~~M.L. Chartier~~

6. US EPA ID Number: ~~MID006558225~~

C. State Transporter's ID

D. Transporter's Phone: ~~810-725-8373~~

7. Transporter 2 Company Name: [illegible]

8. US EPA ID Number: [illegible]

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
15 4022

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 01 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year 12 01 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
7A-44DD # 22 TO

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MU[illegible]
Signature
Date: Month Day Year 12 01 94

GENERATOR

TRANSPORTER

FACILITY

EPA Form 8700-22 (Rev. 9/88)

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200048

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

4. Generator's Phone

A. State Manifest Document Number MI 3723682

B. State Generator's ID

5. Transporter 1 Company Name
M.L. Chartier

6. US EPA ID Number MID006558225

C. State Transporter's ID

D. Transporter's Phone 810-725-8373

7. Transporter 2 Company Name
Buffalo Fuel Corp

8. US EPA ID Number NYD051809952

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	E
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154077

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 01 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Scott A Fritch
Signature: [signature]
Date: Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
7A 99.80 # @ 18 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MU
Signature: [signature]
Date: Month Day Year 12 01 94

GENERATOR

TRANSPORTER

FACILITY

MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICH... AT 1 800 ... OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER ... 424-8802 24 HOURS PER DAY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20050
2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Attn: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723685

B. State Generator's ID

5. Transporter 1 Company Name: ~~M.L. Chartier~~
6. US EPA ID Number: ~~MID006558225~~

C. State Transporter's ID

D. Transporter's Phone: ~~810-725-83~~

7. Transporter 2 Company Name: Buffalo Fuel Corp
8. US EPA ID Number: WAD051809952

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110991-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
152038

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 01 19

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Branham
Signature: Richard Branham
Date: Month Day Year: 12 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NET 44820 # [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MILL
Signature
Date: Month Day Year: 12 01

GENERATOR

TRANSPORTER

FACILITY

ALL SPI[illegible] MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MI[illegible] AT 1-800-[illegible]-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200051

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Mail To: William Guerrra
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3723687

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	12	Y	F006
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154092

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 02 Year 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: S. FRITCH
Signature: Steve A. Fritch
Date: Month 12 Day 02 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JAMES N COMBS JR
Signature:
Date: Month 12 Day 02 Year 94

ALL S CENT MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM IN ... 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200 52
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Phone

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3723688
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	E
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
154091
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month 12 Day 02 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brooks
Signature: Richard Brooks
Date: Month 12 Day 02 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
7B

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr
Signature:
Date: Month 12 Day 02 Year 94

GENERATOR
TRANSPORTER
FACILITY

ALL SHIPMENTS MUST BE REPORTED TO THE MICHIGAN DEPARTMENT OF NATURAL RESOURCES, ... CENTER 1-800-424-8802 24 HOURS PER DAY

EPA Form 8700-22 (Rev. 9/88)
PR 5110

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, 1979, as amended and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 200514

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Bowlerville, MI 48836
Generator's Phone ( )

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3723690

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	P	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154090

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: J. H. E. CHAPERON — Signature: John E. Chaperon — Date: 1/21/97

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Chuck Tyrell — Signature: Chuck Tyrell — Date: 1/21/97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Date

19. Discrepancy Indication Space
NET 39780 # 02070 TP-X

20 Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Date

GENERATOR — TRANSPORTER — FACILITY

24 HR. SPILLS & EMERGENCY CENTER AT 1-800-292-4706 — REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIG. 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20065

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457050

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154216

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Y 12 06 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: [signature]
Date: Month Day Y 2 6 6

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Y

19. Discrepancy Indication Space
NET 40240 # 0 [signature]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MU
Signature: [signature]
Date: Month Day Y 2 6

GENERATOR

TRANSPORTER

FACILITY

ALL S... MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN ...IGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

PR
Rev

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20064
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI (48836)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3457051
B. State Generator's ID
C. State Transporter's ID: 62148
D. Transporter's Phone: 800-685-0670
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154215

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 06 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year: 12 06 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space: MDI RECEIVED 36000 LBS AT 18 TON
FWH

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Comb Jr
Signature
Date: Month Day Year: 14 09 9

GENERATOR
TRANSPORTER
FACILITY

ALL CENTERS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4708 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)
PR 51
Rev. 1

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1969
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969

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Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200056
2. Page 1 of 1
Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3723692
B. State Generator's ID:
C. State Transporter's ID: 67148 S
D. Transporter's Phone: 800-685-0670
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.	N/I
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 05 9[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year: 12 05 9[illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space: MDI RECEIVED 37640 LBS AT 19 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JAMES M COMBS JR.
Signature: [illegible]
Date: Month Day Year: 12 06 9[illegible]

GENERATOR / TRANSPORTER / FACILITY

ALL CEN MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN GAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

PR 511 Rev. 10

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, PA 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20050

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3723696

B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154184

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 06 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: [signature]
Date: Month Day Year 12 06 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NET 906 ~~TAY~~ 20 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MU
Signature: [signature]
Date: Month Day Year 12 06 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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Required under authority of Act 64 1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200061

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number MI 3723697

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154 P10

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 06 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Branton
Signature: [signature]
Date: Month Day Year 12 06 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NET 3772 A 1700

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [signature]
Signature: [signature]
Date: Month Day Year 12 06 9

GENERATOR

TRANSPORTER

FACILITY

ALL SPIL... CENTER ... T BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM IN MI... AT 1-800-... OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE 0-424-8802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1969 as amended and Act 136, PA 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, PA. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20063
2. Page 1 of 1
Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3723699
B. State Generator's ID

4. Generator's Phone (48836)

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154219

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year 12 06 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brandon
Signature: Richard Brandon
Date: Month Day Year 12 06 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NET 43500 # 0 [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MU[illegible]
Signature: [illegible]
Date: Month Day Year 12 06 94

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 Manifest Document No.: 20056

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457052

B. State Generator's ID:

4. Generator's Phone:

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID: 62148 S

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID:

H. Facility's Phone: (313)699-7120

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12 Containers No	Type	13. Total Quantity	14 Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154367

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 12 07 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year: 12 07 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space: MDI RECEIVED 35000 LBS AT 18TON

8B - DS.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name: James M Combs Jr
Signature:
Date: Month Day Year: 12 07 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110
Rev. 10/92

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20067

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3457053

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12 Containers No	Type	13 Total Quantity	14 Unit Wt. Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006	H
b								
c								
d								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154 267

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name	Signature	Date Month Day Year
John E. CHAPERON	John E. Chaperon	12 07 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Steven Chandler	[signature]	12 07 94

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

19. Discrepancy Indication Space MDI RECEIVED 43100 LBS 9T 22 TON
8B-A.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name	Signature	Date Month Day Year
James M Combs Jr	[signature]	12 07 94

GENERATOR

TRANSPORTER

FACILITY

EPA Form 8700-22 (Rev. 9/88)

PR 5110

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 Manifest Document No.: 200 69
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457056
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	21	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154288

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 07 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Branham
Signature: Richard Branham
Date: Month Day Year: 12 07 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

19. Discrepancy Indication Space
NET 50700 #

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: EDWARD M
Signature:
Date: Month Day Year: 12 07 94

EPA Form 8700-22 (Rev. 9/88)
PR 5110

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979, as amended and Act 136 P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20070

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address: Mail To: William Guererra
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3457057

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID: 622175

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
GENERATOR	a	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
	b								
	c								
	d								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

15427

K. Handling Codes for Wastes Listed Above: a/ / b/ / c/ / d/ /

15 Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. Chaperon — Signature: John E. Chaperon — Date: 10/7/94

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Chuck Myers — Signature: Chuck Myers — Date: 10/7/94

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Date

19 Discrepancy Indication Space: MDI RECEIVED 17 TON

20 Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: James M Combs Jr — Signature — Date: 10/7/94

Form 8700-22 (Rev. 9/88)

PR 5110

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1969.
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Form Approved. OMB No. 2050-0039 Expires 3-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law
MID099124299	200711		

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powers Ville, MI 48836
Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457059
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	12	Y	F006	H
b								
d								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
15-4280

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

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Printed/Typed Name	Signature	Date (Month Day Year)
John E. Chaperon	John E. Chaperon	12 07 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Steven Chandler		12 07 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

19. Discrepancy Indication Space
NET 53240#0 27T

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
Edward Mc		12 07 94

EPA Form 8700-22 (Rev. 9/88)

PRS 10
Rev. 10/92

DNR
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Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No: MID099124299 — Manifest Document No: 200049
2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Ann Wallace Conference
The Stanley Works
1000 Stanley Drive
New Britain, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723683

B. State Generator's ID

5. Transporter 1 Company Name: [illegible] Chartier
6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name: [illegible] Fuel Corp
8. US EPA ID Number: MID051809952

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	21	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 110974-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154264

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon — Signature: [signature] — Date: Month 12 Day 07 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brandhorn — Signature: Richard B Brandhorn — Date: Month 12 Day 07 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space: MD RECEIVED 45480 LBS AT 23TON
8B CJS DK.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible] — Signature: [signature] — Date: Month 12 Day 07 Year 94

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979, as amended, and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200172

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone ( )

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 3457060

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID 422145

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12 Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
GENERATOR	a.	X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	12	Y	P006	H
	b.							
	c.							
	d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
NET WT. 39020
20 TON
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information
15345

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Date Month Day Year
John E. Chaperon		12 15 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Charles Myers		12 15 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

19. Discrepancy Indication Space
17A-88.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year
Thomas Burns		12 20 94

Form 8700-22 (Rev. 9/88)

PR 5110

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200713
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3457061
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

24TON
NET WT. 48080

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154343

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 08 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brenham
Signature: [illegible]
Date: Month Day Year: 12 08 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
TA - [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Thomas Brunt
Signature: [illegible]
Date: Month Day Year: 12 08 94

EPA Form 8700-22 (Rev. 9/88)
PR 5110

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 00 74
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI (48836)
Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457062
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste No.	N/H
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	21	Y	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET WT. 50340
25 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
154344

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John F. CHAPERON
Signature: [signature]
Date: Month 12 Day 08 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: [signature]
Date: Month 12 Day 08 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
7A - 8S

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Thomas Brunz
Signature: [signature]
Date: Month 12 Day 08 Year 94

EPA Form 8700-22 (Rev. 9/88)
PR 5110
Rev. 10/92

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Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 2 0 0 7 5 — Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Attn To: William Guererra
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Generator's Phone ( )
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457063
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: N Y D 0 5 1 8 0 9 9 5 2
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: M I D 0 0 0 7 2 4 8 3 1
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	0 0 1	D T	1 2	Y	F 0 0 6 H
b					

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
NET WT. 47760
24 Drums
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information
15430

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature:
Date: Month 12 Day 05 Year 97

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
7A cJS

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Thomas Bowers
Signature:
Date: Month 12 Day 9 Year 97

PR 5110

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 200087

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powlesville, MI (48836)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457075

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID 621485

D. Transporter's Phone 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone (313)699-7120

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER)	HM		12 Containers No	Type	13 Total Quantity	14 Unit Wt. Vol	I. Waste No.	N/H
a	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
b								
c								
d								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154405

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year 12 09 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chuck Myers
Signature: Chuck Myers
Date: Month Day Year 12 09 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space
NLT 4T 24 TOV

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Ward Mar
Signature
Date: Month Day Year 12 09 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110
Rev. 10/92

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: MID099124299 20088
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powderville, MI 48836
Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457076
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	I. Waste N/H
a	X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	12	Y	F006	H
b							
c							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
15407

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: Steven Chandler
Date: Month 12 Day 09 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
NET 2760 26 TN

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: EDWARD MOL
Signature:
Date: Month 12 Day 20 Year 94

EPA Form 8700-22 (Rev. 9/86)
PR 5110
Rev. 10/92

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Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MIDD991242998 — Manifest Document No. 20089

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Powderville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457077

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724881

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	X	001	DT	12	Y	F006	H
b.							
c.							
d.							

GENERATOR

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
15408

K. Handling Codes for Wastes Listed Above
a/
b/
c/
d/

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month 12 Day 01 Year 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month 12 Day 19 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space
NET 49100 ABV 25700

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month 12 Day 20 Year 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
DATE ☐ DIS. ☐ REC. ☐ PR. ☐

Required under authority of Act 64, PA. 1979 as amended and Act 136, PA. 1969. Failure to file is punishable under Section 299.548 MCL or Section 10 of Act 136, PA. 1969.

Please print or type. Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 200000
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457078
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	21	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154406

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon — Signature: John E. Chaperon — Date: Month Day Year: 12 09 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Brauhem — Signature: Richard Brauhem — Date: Month Day Year: 12 09 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year:

19. Discrepancy Indication Space
NET 37320 [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Edward Mu — Signature: [signature] — Date: Month Day Year: 12 09 94

EPA Form 8700-22 (Rev. 9/88) PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20068
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI (48836)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number MI 3457055

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809512
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	12 Containers No.	Type	13 Total Quantity	14 Unit Wt/Vol	I. Waste No.	N/H
GENERATOR a.	X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	12000	Y	P006	H
b.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
154569
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Date Month Day Year
Julie E. CHAPERON	Julie E. Chaperon	11 17 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Richard Brauher	Richard Brauher	11 17 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

FACILITY

19. Discrepancy Indication Space MDI RECEIVED 88.36 LBS AT 24 TON

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year
JAMES M COMBS JR		11 21 94

EPA Form 8700-22 (Rev. 9/88) PR 5110

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 — Manifest Document No. 2007 7

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI (48836)

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457065

B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID: 621485

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID:

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
GENERATOR a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510 154567

K. Handling Codes for Wastes Listed Above: a/ / b/ / c/ / d/ /

15 Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN E. CHAPERON — Signature: [signature] — Date: Month Day Year 12/13/94

TRANSPORTER

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Chuck Myers — Signature: [signature] — Date: Month Day Year 12/13/94

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Date: Month Day Year

FACILITY

19 Discrepancy Indication Space: RECEIVED 34680 LBS AT ITON

20 Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: JAMES M COMBS JR — Signature: [signature] — Date: Month Day Year 12/12/94

EPA Form 8700-22 (Rev. 9/88)

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979, as amended and Act 136, P.A. 1969.

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Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: MID099124299 / 2000 78

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3457066

B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.

6. US EPA ID Number: NYD051809952

C. State Transporter's ID

D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	[illegible]	Y	F006	H
b.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154568

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E Chaperon
Signature: [signature]
Date: Month Day Year: 12 13 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [signature]
Signature: [signature]
Date: Month Day Year: 12 13 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space: MDI RECEIVED 48486 LBS AT ZATON

8B8

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Sr
Signature: [signature]
Date: Month Day Year: 12 13 94

EPA Form 8700-22 (Rev. 9/88)

PR 5110
Rev 10/92

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: MID099124299200BD
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
Stanley Tools
425 Frank Street
Fowlerville, MI 48836
Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 3457068
B. State Generator's ID:

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID:
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID:
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
NET WT: 64100
32 TON

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

154534

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month 12 Day 12 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: H.R. Carey
Signature: H.R. Carey
Date: Month 12 Day 12 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: H.R. Carey
Signature:
Date: Month Day Year

19. Discrepancy Indication Space
8B - [illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Thomas Brunty
Signature: [illegible]
Date: Month 12 Day 13 Year 94

EPA Form 8700-22 (Rev. 9/88)
PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 10025
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn. William Converra
The Stanley Works
[illegible] Drive
[illegible] Ct. 06053

4. Generator's Phone

A. State Manifest Document Number: MI 3723626
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone: 810-725-8373
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT		Y	F006	H
b								
c								
d								

J. Additional Descriptions for Materials Listed Above
Approval # 110774-MZ
153535
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 11 Day 21 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Linwood OSTERLAND
Signature: Linwood Osterland
Date: Month 11 Day 21 Year 94

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space ENVOTECH RECEIVED 36960 LBS AT 18 TON
8B

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M. Combs, Jr.
Signature
Date: Month 11 Day 21 Year 94

EPA Form 8700-22 (Rev. 9/88)

TSDF COPY

PR 5110
Rev. 10/92

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 10026
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Attn: William Guerrero
The Stanley Works
1000 Stanley Drive
Pittsburgh, PA 15203

4. Generator's Phone

A. State Manifest Document Number: MI 3723627

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt. Vol.	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	36	Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval # 110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153541

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month 11 Day 21 Year 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month 11 Day 21 Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space: ENVOTECH RECEIVED 42800 LBS AT 21 TON
8B 25.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M. Combs Jr. — Signature: [signature] — Date: Month 11 Day 21 Year 94

GENERATOR — TRANSPORTER — FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 800-424-8802 24 HOURS PER DAY.

PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 84, 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 100 27

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

A. State Manifest Document Number: MI 3723628

B. State Generator's ID

5. Transporter 1 Company Name: M.L. Chartier
6. US EPA ID Number: MID006558225

C. State Transporter's ID

D. Transporter's Phone: 810-725-8373

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone: (313)699-7120

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	50	Y	F006
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval # 116774-112
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
153544

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month 11 Day 21 Year 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Ray Bertram — Signature: Ray Bertram — Date: Month 11 Day 21 Year 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space
MD 18 RQ 45580 # @ 23 TON

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EDWARD MULL — Signature — Date: Month 11 Day 21 Year 9

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS CENTER AT 424-8802 24 HOURS PER DAY
BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN 1-800-... OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299201 Manifest Document No.
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 4103805
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (313)699-7120

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y F	006 H
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154874

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 12 1 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Steven Chandler
Signature: [signature]
Date: Month Day Year: 12 1 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space MDI RECEIVED 39800 LBS AT 20 TON
7B-X.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: [signature]
Date: Month Day Year: [illegible]

GENERATOR
TRANSPORTER
FACILITY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969
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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 20113
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guererra
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

A. State Manifest Document Number: MI 4103806
B. State Generator's ID

4. Generator's Phone

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111
10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ
Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510
154878

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 12 20 99

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Richard Branham
Signature: Richard Branham
Date: Month Day Year: 12 19 99

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space MDI RECEIVED 39520 LBS AT 20 TON
TB pk Dr.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James M Combs Jr.
Signature: James M Combs
Date: Month Day Year: 12 20 99

GENERATOR

TRANSPORTER

FACILITY

ALL PERSONS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN FOUR CAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)
PR 51

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 01114
2. Page 1 of 1
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank Street
Fowlerville, MI 48836

Mail To: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britian, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 4103807
B. State Generator's ID

5. Transporter 1 Company Name: Buffalo Fuel Corp.
6. US EPA ID Number: NYD051809952
C. State Transporter's ID
D. Transporter's Phone: 800-685-0670

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal, Inc.
49350 N. I-94 Service Drive
Belleville, MI 48111

10. US EPA ID Number: MID000724831
G. State Facility's ID
H. Facility's Phone: (313)699-7120

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N
a.	X	RQ Waste Environmentally Hazardous Substances, Solid, N.O.S., Hazardous Class 9, UN 3077, Packaging Group III, (Nickel, Copper)	001	DT	00021	Y	F006	E
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994-MZ

Ref: Guidebook No. 31
Emergency Phone No. (810) 348-2510

154875

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

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Printed/Typed Name: John E. Chaperon
Signature: John E. Chaperon
Date: Month Day Year: 12 19 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Donald L. Lambert
Signature: Donald L. Lambert
Date: Month Day Year: 12 19 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space MDI RECEIVED 29680 LBS AT 20 TON
JB-[illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: James [illegible]
Signature: [illegible]
Date: Month Day Year: 12 20 94

EPA Form 8700-22 (Rev. 9/88)

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979 as amended and Act 136, PA 1969

Failure to file in compliance of Act section 299.548 MCL or Section 10 of Act 136, PA 1969

Please print or type:

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 20154
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Stanley Tools, 425 Frank St, Fowlerville, Mi 48836
Mail to: William Guerrera, The Stanley Works, 1000 Stanley Drive, New Britain, Ct 06053
4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450721
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: 810-789-715[illegible]
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: 313-699-7120

5. Transporter 1 Company Name: Young's Environmental
6. US EPA ID Number: MID106869506
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: Michigan Disposal, Inc., 49350 N. I-94 Service Drive, Belleville, Mi 48111
10. US EPA ID Number: MID000724831

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/
a.	X	RQ Waste Environmentally Hazardous Substances, N.O.S. Hazardous Class 9, UN3077 Packaging Group III (Nickel, Copper)	001	DT	00020	Y	F006	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #110994 MZ
Ref Guidebook #31
Emergency Phone No.: 810-348-2510

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

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Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 04 24 9[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jackie Land — Signature: Jackie Land — Date: Month Day Year: 04 24 9[illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Date: Month Day Year:

GENERATOR / TRANSPORTER / FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) To be mailed by Michigan DNR PR 511

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1969.

section 299.548 MCL or Section 10 of Act 138, P.A. 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MI D 0 9 9 1 2 4 2 9 9 — Manifest Document No. 2 0 1 5 Y

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St
Fowlerville, Mi 48836

Mail to: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450718

B. State Generator's ID

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc

6. US EPA ID Number: M I D 1 0 6 8 6 9 5 0 1 6

C. State Transporter's ID

D. Transporter's Phone: 810-789-7153

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Dynecol, Inc.
6520 Georgia Street
Detroit, Mi 48211

10. US EPA ID Number: M I D 0 1 7 4 2 5 9 5 6 5

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/I
a. X RQ Waste, Environmentally Hazardous Substance, Liquid, NOS, Hazardous Class 9, UN3082, Packaging Group III (Nickel, Copper)	001	TT	01463	gal	F006	H
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above: a/ b/ c/ d/

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Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month 04 Day 21 Year 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: STEVEN MIDDLETON — Signature — Date: Month 04 Day 21 Year 9

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Date: Month Day Year

EPA Form 8700-22 (Rev. 9/88) To be mailed by Michigan DNR

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, PA 1969.

Failure to file in accordance with section 299.548 MCL or Section 10 of Act 136, PA 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MI D 0 9 9 1 2 4 2 9 9 | Manifest Document No. 2 0 1 5 1 2

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Stanley Tools, 425 Frank St, Fowlerville, Mi 48836. Mail to: William Guerrera, The Stanley Works, 1000 Stanley Drive, New Britain, Ct 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450719

B. State Generator's ID

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc

6. US EPA ID Number: M I D 1 0 6 8 6 9 5 0 6

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: Dynecol, Inc, 6520 Georgia Street, Detroit, Mi 48211

10. US EPA ID Number: M I D 0 7 4 2 5 9 5 6 5

G. State Facility's ID

H. Facility's Phone

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X RQ Waste Environmentally Hazardous Substances Liquid, NOS Hazardous Class 9 UN3082 Packaging Group III (Nickel, Copper)	001	TT	11462	gal	F006	H
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above: a/ b/ c/ d/

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: JOHN E. CHAPERON | Signature: John E. Chaperon | Date: Month 04 Day 21 Year 90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: STEVE MIDDLETON | Signature: St Middle | Date: Month 04 Day 21 Year 9

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Date: Month Day Year

EPA Form 8700-22 (Rev. 9/88) To be mailed by Michigan DNR

PR 5110

APPENDIX E

ENVIRONMENTAL QUALITY LABORATORIES, INC.

LABORATORY RESULTS

ENVIRONMENTAL QUALITY LABORATORIES, INC.

44075 Phoenix Drive
Sterling Heights, Michigan 48314-1420
810-731-1818
Outside Michigan Dial 1-800- 368-5227
Fax Line 810-731-2590
Federal I.D. # 38-2291504

CLIENT: O'BRIEN & GERE TECH. SAMPLE NO. 12918
39500 ORCHARD HILLS PLACE, STE 305
NOVI, MI 48375

SAMPLE DESCRIPTION: FOWLERVILLE MI
FILL MAT'L A SOIL

DATE REPORTED: 12-20-94
DATE RECEIVED: 12-16-94

TOTAL METALS (all results in ppM or mg/kg)		METHOD SW 846-B	DATE OF ANALYSIS	ANALYSTS INITIALS
ARSENIC	= 3.5	6020	12/19/94	JD
BARIUM	= 12.3	6020	12/19/94	JD
CADMIUM	= 0.2	6020	12/19/94	JD
CHROME, TOT.	= 4.5	6020	12/19/94	JD
COPPER	= 6.9	6020	12/19/94	JD
LEAD	= 9.3	6020	12/19/94	JD
SELENIUM	=*LESS THAN 0.05	7740	12/19/94	JD
SILVER	= LESS THAN 0.5	6020	12/19/94	JD
ZINC	= 26.8	6020	12/19/94	JD

***NOTE: TERM "LESS THAN" DENOTES THAT ANALYTE RESULT IS BELOW THE REPORTED REGULATORY DERIVED TARGET LIMIT OF DETECTION.**

ALLEN LUEBKE, LAB MANAGER Allen K Luebke

THOMAS MEGNA, PRESIDENT Thomas J Megna (SD)
REFERENCES: SW 846. ALL CURRENT EDITIONS.
sd

ENVIRONMENTAL QUALITY LABORATORIES, INC.

44075 Phoenix Drive
Sterling Heights, Michigan 48314-1420
810-731-1818
Outside Michigan Dial 1-800- 368-5227
Fax Line 810-731-2590
Federal I.D. # 38-2291504

CLIENT: O'BRIEN & GERE TECH. SAMPLE NO. 12918
39500 ORCHARD HILLS PLACE, STE 305
NOVI, MI 48375

SAMPLE DESCRIPTION: FOWLERVILLE MI
FILL MAT'L A SOIL

DATE REPORTED: 12-20-94
DATE RECEIVED: 12-16-94

"CORRECTED REPORT"**

TOTAL METALS (all results in ppB or ug/L)		METHOD SW 846-B	DATE OF ANALYSIS	ANALYSTS INITIALS
MERCURY	= 0.7	7470	12/20/94	JD

**NOTE: REPORT CORRECTED DUE TO TYPOGRAPHICAL ERROR.

ALLEN LUEBKE, LAB MANAGER Allen K Luebke (SD)

THOMAS MEGNA, PRESIDENT Thomas J Megna (SD)
REFERENCES: SW 846. ALL CURRENT EDITIONS.
sd

ENVIRONMENTAL QUALITY LABORATORIES, INC.

44075 Phoenix Drive
Sterling Heights, Michigan 48314-1420
810-731-1818
Outside Michigan Dial 1-800- 368-5227
Fax Line 810-731-2590
Federal I.D. # 38-2291504

CLIENT: O'BRIEN & GERE TECH. SAMPLE NO. 12918
39500 ORCHARD HILLS PLACE, STE 305
NOVI, MI 48375

SAMPLE DESCRIPTION: FOWLERVILLE MI
FILL MAT'L A SOIL

DATE REPORTED: 12-20-94
DATE RECEIVED: 12-16-94
DATE ANALYZED: 12-16-94
DATE EXTRACTED:12-16-94
ANALYZED BY: AG

8240 SCAN
VOLATILE ORGANICS PAGE 1

CAS NO.	COMPOUND NAME	METHOD	CONCENTRATION
1.	ACETONE	8240	*LESS THAN 100 ppBILLION
2.	BENZENE	8240	LESS THAN 10 ppBILLION
3.	BROMODICHLOROMETHANE	8240	LESS THAN 10 ppBILLION
4.	BROMOFORM	8240	LESS THAN 10 ppBILLION
5.	BROMOMETHANE	8240	LESS THAN 10 ppBILLION
6.	2-BUTANONE (MEK)	8240	LESS THAN 100 ppBILLION
7.	CARBON DISULFIDE	8240	LESS THAN 100 ppBILLION
8.	CARBON TETRACHLORIDE	8240	LESS THAN 10 ppBILLION
9.	CHLOROBENZENE	8240	LESS THAN 10 ppBILLION
10.	CHLORODIBROMOMETHANE	8240	LESS THAN 10 ppBILLION
11.	CHLOROETHANE	8240	LESS THAN 10 ppBILLION
12.	CHLOROFORM	8240	LESS THAN 10 ppBILLION
13.	CHLOROMETHANE	8240	LESS THAN 10 ppBILLION
14.	DIBROMOMETHANE	8240	LESS THAN 10 ppBILLION
15.	1,1-DICHLOROETHANE	8240	LESS THAN 10 ppBILLION
16.	1,2-DICHLOROETHANE	8240	LESS THAN 10 ppBILLION
17.	1,1-DICHLOROETHENE	8240	LESS THAN 10 ppBILLION
18.	total-1,2-DICHLOROETHENE	8240	LESS THAN 10 ppBILLION
19.	1,2-DICHLOROPROPANE	8240	LESS THAN 10 ppBILLION
20.	cis-1,3-DICHLOROPROPENE	8240	LESS THAN 10 ppBILLION
21.	trans-1,3-DICHLOROPROPENE	8240	LESS THAN 10 ppBILLION

***NOTE: TERM "LESS THAN" DENOTES THAT ANALYTE RESULT IS BELOW THE REPORTED REGULATORY TARGET LIMIT OF DETECTION.**

THOMAS MEGNA, PRESIDENT Thomas A Megna (10)

ALLEN LUEBKE, LAB MANAGER Allen K Luebke (10)
sd

ENVIRONMENTAL QUALITY LABORATORIES, INC.
44075 Phoenix Drive
Sterling Heights, Michigan 48314-1420
810-731-1818
Outside Michigan Dial 1-800- 368-5227
Fax Line 810-731-2590
Federal I.D. # 38-2291504

DEC 2 7 1994

CLIENT: O'BRIEN & GERE TECH.
39500 ORCHARD HILLS PLACE, STE 305
NOVI, MI 48375

SAMPLE NO. 12918

STANLEY

SAMPLE DESCRIPTION: FOWLERVILLE MI
FILL MAT'L A SOIL

DATE REPORTED: 12-20-94
DATE RECEIVED: 12-16-94
DATE ANALYZED: 12-16-94
DATE EXTRACTED:12-16-94
ANALYZED BY: AG

8240 SCAN
VOLATILE ORGANICS PAGE 2

CAS NO.	COMPOUND NAME	METHOD	CONCENTRATION
22.	ETHYLBENZENE	8240	*LESS THAN 10 ppBILLION
23.	2-HEXANONE	8240	LESS THAN 100 ppBILLION
24.	METHYLENE CHLORIDE	8240	LESS THAN 10 ppBILLION
25.	4-METHYL-2-PENTANONE	8240	LESS THAN 100 ppBILLION
26.	STYRENE	8240	LESS THAN 10 ppBILLION
27.	1,1,2,2-TETRACHLOROETHANE	8240	LESS THAN 10 ppBILLION
28.	TETRACHLOROETHYLENE	8240	LESS THAN 10 ppBILLION
29.	TOLUENE	8240	LESS THAN 10 ppBILLION
30.	1,1,1-TRICHLOROETHANE	8240	LESS THAN 10 ppBILLION
31.	1,1,2-TRICHLOROETHANE	8240	LESS THAN 10 ppBILLION
32.	TRICHLOROETHYLENE	8240	LESS THAN 10 ppBILLION
33.	TRICHLOROFLUOROMETHANE	8240	LESS THAN 10 ppBILLION
34.	VINYL ACETATE	8240	LESS THAN 10 ppBILLION
35.	VINYL CHLORIDE	8240	LESS THAN 10 ppBILLION
36.	XYLENES	8240	LESS THAN 30 ppBILLION

***NOTE: TERM "LESS THAN" DENOTES THAT ANALYTE RESULT IS BELOW THE REPORTED DERIVED TARGET LIMIT OF DETECTION.**

THOMAS S. MEGNA, PRESIDENT Thomas S Megna (SO)

ALLEN LUEBKE, LAB MANAGER Allen K Luebke (SO)

sd

APPENDIX F

DYNECOL, INC. LABORATORY RESULTS

DYNECOL
TECHNICAL SERVICES

DYNECOL, INC
6520 GEORGIA STREET
DETROIT, MICHIGAN 48211
PHONE: (313) 571-7211
FAX: (313) 571-7196

ANALYTICAL REPORT

REPORT DATE: 12/28/94 PAGE 1
REPORT TIME: 10:12 am

CUSTOMER INFORMATION: YOUNG'S ENVIRONMENTAL CLEANUP, INC.
G-5305 NORTH DORT HIGHWAY
FLINT MI 48505

PROJECT NAME: STANLEY TOOLS
PHYSICAL DESCRIPTION: YELLOW LIQUID
APPROVAL NUMBER: 3536 P
WASTE TYPE: SURFACE WATER

PARAMETER	SAMPLE RESULT	UNITS	EPA LIMIT	EPA#	METHOD
IGNITABILITY	>200	F	<140	D001	1010
PH/CORROSIVITY	7.51	UNITS	<= 2 OR >= 12.5	D002	9040\D4980
REACTIVITY:					
CYANIDE	<10	mg/l	250	D003	7.3.3.2
SULFIDE	<20	mg/l	500	D003	7.3.4.2
TOTAL PCB	<1.0	mg/l	50	N/A	8080
TOTAL ORGANIC HALOGENS	<100	mg/l	1000	N/A	9020
TCLP METALS:		mg/l			
ARSENIC	<1.0		5	D004	6010
BARIUM	<5.0		100	D005	6010
CADMIUM	<0.50		1	D006	6010
CHROMIUM	<1.0		5	D007	6010
LEAD	<1.0		5	D008	6010
MERCURY	<0.10		0.2	D009	7470
ZINC	<5.0		500	003D	6010
SELENIUM	<0.50		1	D010	6010
SILVER	<1.0		5	D011	6010
COPPER	<1.0		100	001D	6010
THALLIUM	<5.0			N/A	6010
NICKEL	<1.0			N/A	6010

LABORATORY SUPERVISOR SENIOR CHEMIST DATE 12/28/94

APPENDIX I

APPENDIX I

BURIED CONTAINER REMOVAL REPORT

BURIED CONTAINER REMOVAL PLAN IMPLEMENTATION STANLEY TOOLS FOWLERVILLE, MICHIGAN

Prepared for:
THE STANLEY WORKS

JOB NO.: 03163-055-148
JULY 10, 1995

DAMES & MOORE

DAMES & MOORE

644 LINN STREET, SUITE 501, CINCINNATI, OHIO 45203
(513) 651-3440 FAX: (513) 651-3452

July 10, 1995

United States Environmental Protection Agency
Region V
77 West Jackson Boulevard
Chicago, IL 60604-3590

Attention: Mr. Michael Valentino

Ladies and Gentlemen:

Re: Buried Container Removal
Plan Implementation
Stanley Tools, Fowlerville, Michigan

On behalf of The Stanley Works (Stanley), Dames & Moore is pleased to submit three copies of the Buried Container Removal Plan Implementation (BCR).

Please direct any questions or comments on the BCR to the undersigned, or to William Guerrera of The Stanley Works at (203) 827-3802.

Very truly yours,

DAMES & MOORE

Don Porterfield, P.E.
Senior Engineer

Jennifer J. Krueger, C.P.G.
Associate

DP/JJK:STA(1)/148ps
03163-055-148

Enclosure

Copy W. Guerrera; Stanley
A. Kolesar; Skadden, Arps, Slate, Meagher and Flom

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1.0 INTRODUCTION

This report outlines the activities that were undertaken to implement the Buried Container Removal (BCR) Plan for the Stanley Tools site located in Fowlerville, Michigan. The BCR Plan was transmitted to Region V of the U.S. EPA on May 6, 1991, following revisions made to address comments made by EPA in a letter dated April 5, 1991. The plan called for excavation of a suspected buried container area and removal and disposal of any containers encountered.

A Request For Proposals (RFP) to perform work detailed in the BCR Plan was prepared by Dames & Moore and issued on July 5, 1994. An Addendum to the RFP for implementation of the BCR Work Plan, dated July 15, 1994, was issued to address questions arising from a pre-construction meeting held at the site. This Addendum added the following to the scope of work; disposal of miscellaneous soil piles located at the site, removal of standing water and backfilling an existing excavation east of the existing building, site grading to promote positive surface drainage and seeding and mulching the area west of the existing fence in the designated BCR excavation area.

2.0 BACKGROUND

2.1 SITE DESCRIPTION

The Stanley Tools facility is located at 425 West Frank Street on the southwestern side of Fowlerville, Michigan (Figure 1). The westside of the site is bordered by the Red Cedar River. The site comprises an area of approximately 8 acres and currently remains unoccupied. The manufacturing buildings were leveled and the debris removed in 1993. The site has a topographic relief of 7 feet, ranging in elevation from approximately 881 feet near the Red Cedar River to approximately 888 feet near Frank Street. Surface water drains directly toward the Red Cedar River, or toward one of the two drainage ditches located north and south of the former building. The majority of the site is situated within the 100-year floodplain.

2.2 BURIED CONTAINER DISCOVERY

Stanley is currently conducting a RCRA facility investigation (RFI). During the course of monitoring well installation in conjunction with Phase I of the RFI in November

1990, portions of buried containers were discovered within the southwestern portion of the facility. A magnetometer was used to investigate the suspected container burial site adjacent to the western fence line along the southwestern property boundary. Based on the results of the magnetometer survey, an area of suspected buried containers was delineated (see Figure 2) and a plan for removal, characterization, and disposal of excavated non-soil materials was developed.

3.0 SCOPE OF WORK

The scope of work originally outlined in the BCR Work Plan called for the excavation of the suspected buried container area (Figure 2) and removal, characterization and disposal of any non-soil materials encountered. Soils encountered during excavation which showed visible discoloration or emitted photoionization detector (PID) readings of ≥ 100 ppm above background levels were to be removed from the excavation and properly disposed.

The scope of work was expanded by an Addendum to the RFP issued July 15, 1994.

The Addendum called for backfilling an existing excavation adjacent to the existing building, removal and disposal of additional material located on the site, site grading, and seeding and mulching as discussed below. The Addendum required that the contractor backfill an existing excavation east of the existing building (Figure 2) with fill from off-site. The fill was required to be analyzed for Michigan RCRA metals, volatile organic compounds (VOCs), polychlorinated biphenols (PCBs), and polynuclear aromatic (PNAs) prior to being brought on-site. Any standing water in the excavation was to be removed and disposed and the hole lined with 6 mil polyethylene sheeting before backfilling.

The additional material to be removed from the site consisted of a pile of concrete and soil located northeast of monitoring well MW-B3, a pile of soil located north of the former plating area, and a 25-foot by 40-foot area of yellow stained soil located adjacent to the former plating area in the southwest portion of the former plant building. The location of these materials is shown on Figure 2.

Required site grading consisted of grading the area at the southwest corner of the former plant area to promote positive drainage and avoid ponding.

The Addendum also added seeding and mulching of the area located west of the fence that crosses the BCR excavation area to the scope of work.

4.0 PREPARATIONS

4.1 CONTRACTOR SELECTION

In order to implement the approved BCR Plan, an RFP was prepared by Dames & Moore and issued on July 5, 1994. A pre-bid meeting was held at the site on July 12, 1994 and an Addendum to the RFP was issued July 15, 1994. Work associated with an Interim Remedial Measures (IRM) Work Plan was bid in conjunction with the BCR work. Bids were received from three contractors. After evaluating each of the bids, the contract was awarded to O'Brien & Gere Technical Services, Inc. (OBG Tech) of Plainville, Connecticut. Oversight and post-excavation sampling was performed by Dames & Moore.

4.2 PRE-CONSTRUCTION MEETING

A pre-construction meeting was held at the site on September 26, 1994, and was attended by representatives of Stanley, Dames & Moore, Johnson Controls (the former owner of the site), and OBG Tech. The various tasks of the BCR Plan were discussed and any clarification as to the intent of the contract documents or scope of work to be performed by OBG Tech were resolved.

The contractor elected to proceed with IRM work in the fall of 1994 until the onset of winter weather at the end of December, which prevented further work at that time. The remainder of the IRM work and all BCR work was deferred until the spring of 1995.

4.3 SUBMITTALS

The contractor submitted the following documents prior to proceeding with construction:

- Health and Safety Plan
- Stormwater Control Plan
- Site Security Plan
- Dust Control Plan
- Certifications
- Construction Schedule
- Drum Storage Area and Decontamination Pad Shop Drawings
- Disposal Approvals

Dames & Moore received a Health and Safety Plan, Stormwater Control Plan, Site Security Plan and Dust Control Plan from OBG Tech on October 17, 1994. These plans included both IRM and BCR work. Dames & Moore received a Construction Schedule, Certifications and Disposal Approval for the water located east of the existing building on April 3, 1995. Shop Drawings for the Drum Storage Area and Decontamination Pad were received on April 13, 1995. Disposal approval for the miscellaneous soil piles was received on April 21, 1995.

Submittals were reviewed by Dames & Moore for conformity with the work plan and addendum to the RFP and were found to be sufficient.

4.4 PERMITTING

The Livingston County Drainage Commission (LCDC) requires that a permit be obtained and a bond posted prior to any excavation within 500 feet of a water body. The contractor had obtained a permit and posted a bond prior to work performed at the site in the fall of 1994. This permit also included work to be performed under the BCR Work Plan. The permit was received on November 4, 1994 and is presented as Appendix A.

5.0 FIELD PROCEDURES

The following sections summarize the field activities undertaken to complete the scope of work as described in Section 3.0 of this report.

5.1 MOBILIZATION

OBG Tech elected to retain a subcontractor, Young's Environmental Cleanup, Inc. (Young) of Flint, Michigan, to assist with the BCR work. Mark Sydorowych, OBG Tech supervisor, and two equipment operators from Young began work on the site on April 17, 1995.

The equipment which was used throughout the project was owned by Young. A Caterpillar D5 dozer and a Caterpillar 300 excavator were brought on-site on April 17, 1995 and remained on-site throughout the project.

5.2 SITE PREPARATION

Site preparation for the BCR work consisted of removal of the fencing located within the area designated for excavation and construction of a drum storage area. The drum storage area was located east of the designated area of BCR excavation as shown on Figure 2. The drum storage area was surrounded by a berm of soil to contain any spills and prevent runoff. It was lined with 80-mil high density polyethylene which extended over the berm.

5.3 BURIED CONTAINER REMOVAL

The following sections describe the work associated with excavating, removing, containerizing, analyzing and disposing excavated non-soil materials and discolored soil within the limits defined by the BCR Work Plan.

5.3.1 Excavation

Excavation of the designated area began in the northeast corner on April 18, 1995 and proceeded in a southerly direction. The soils were excavated in approximately 1-foot thick layers until reaching a depth of four feet. During excavation, any soil materials which appeared to be stained or discolored were removed and stockpiled on polyethylene sheeting prior to placement in covered roll-off boxes. Excavation in the northeastern portion of the area delineated for excavation produced several pieces of rusted scrap material located within two feet of the existing ground surface. The materials were not visually contaminated and therefore were removed and placed on polyethylene sheeting until the

excavation was completed and the material could be disposed. Soils encountered at depths between 2 and 4 feet in the northeast portion of the excavation were observed to be discolored and produced an odor, and therefore were removed and segregated for later disposal .

As the excavation proceeded to the south, buried containers were encountered in the area shown on Figure 3. The containers appeared to be rusted 55-gallon drums randomly placed at a depth of approximately 18 to 24 inches. Photographs of typical drums removed are presented as Appendix B. The drums contained solids which were primarily gray, black and rust colored. The fencing in the area was removed and excavation continued in a westerly direction along the southern limit of the designated area. When drums were encountered they were removed from the excavation and placed in overpacks on the drum storage pad. The overpacks were then numbered and a physical characteristic information sheet, was completed. The information sheets for overpacks BCR-1 through BCR-12 are presented as Appendix C. The soils immediately surrounding the drums that visually appeared to be stained were removed and placed in roll-off boxes for disposal. The stained and discolored soil removed from this area, and the northeast corner of the excavation totaled approximately 140 cubic yards.

As excavation proceeded to the west, the excavated soils appeared to be native soils. The only non-native material encountered was the remnants of a wire fence. Excavation of the designated area was completed on April 19, 1995.

5.3.2 Magnetometer Survey and Excavation Inspection

Once excavation was completed, the bottom of the excavation was swept with a magnetic locator. The magnetic locator, a Schonsted GA32 (Serial # 10609) was rented from Instrument Sales & Service, Inc. of Livonia, Michigan. The magnetic locator detected no metal in the excavation with the exception of the existing monitoring wells (MW-B1 and MW-B2), and a Keck well (OW-2) (Figure 3).

The sides of the excavation were also examined for visual evidence of buried containers. No indications of further buried containers were found.

5.3.3 Backfilling

After excavation was completed and samples from the bottom of the excavation had been collected (see Section 5.4), the excavation was backfilled. The soils from the excavation that were not visibly stained were placed back into the northwestern portion of the excavation and lightly compacted with the bucket of the excavator. The remaining portion of the excavation to be backfilled with soil from off-site was lined with polyethylene sheeting, backfilled with a sandy material from off-site, and compacted with the bucket of the excavator. Approximately 150 cubic yards of fill were required to replace the discolored soils which were removed for offsite disposal.

5.3.4 Analysis and Disposal

The contractor collected a composite sample of the discolored soil that was removed from the excavation and a composite sample of the solids contained in the drums. These samples were submitted to Envotech Management Services, Inc. of Belleville, Michigan for analysis using the Toxicity Characteristic Leaching procedure (TCLP). The composite sample of drum materials resulted in 585 mg/L TCLP for zinc, exceeding the Michigan limit of 500 mg/L for a characteristic hazardous waste. Hexachlorobenzene was also detected at 0.15 mg/L, which exceeds the TCLP limit of 0.13 mg/L for a characteristic hazardous waste. The composite sample of discolored soil did not contain detectable levels by the TCLP. The results of the analysis are presented as Appendix D. After excavation the overpacked drums were covered with polyethylene sheeting until disposal approval could be obtained.

The soil was classified as contaminated soil (non-RCRA, non-hazardous) and the solids contained in the drums were classified as Hazardous Solid Waste (D032) The material (660 gallons of solids in drums and 140 cubic yards of soil) was removed from the site on May 31, 1995 through June 2, 1995 for disposal at Michigan Disposal and Wayne Disposal in Belleville, Michigan. Disposal manifests for soil and drums are presented as Appendices E and F, respectively.

5.4 POST-EXCAVATION SAMPLING

Dames & Moore conducted post-excavation soil sampling in the excavated areas. Two sampling locations were chosen and are shown on Figure 3 as BCR-1 and BCR-2.

Sampling location BCR-1 was located in the northeast corner of the excavation where the discolored soils were observed. Sampling location BCR-2 is located in the area in which the buried containers were discovered.

Two samples were taken at each sampling location. The samples were collected using a hand auger at a depths of approximately 6 (BCR-1/1 and BEC 2/1) and 12 inches (BCR 1/2 and BCR 2/2) below the bottom of the excavation. The auger was decontaminated between samples. Soil samples were also screened for VOCs using an HNu with an 11.7 eV lamp at depths of 18 and 24 inches. The results of the HNu screening indicated background levels at each location.

After collection, each sample was placed in laboratory supplied containers and shipped to Quanterra, Inc. in Arvada, Colorado. Three of the four samples were analyzed for total metals, PCBs, total petroleum hydrocarbons (TPHs), cyanide, VOCs, and SVOCs. The fourth sample (BCR 2/2) was analyzed for Appendix IX metals, inorganics, pesticides, PCBs, herbicides, VOCs, SVOCs, dioxins and furans. Table 1 summarizes the analytical results for compounds that were detected.

Concentrations of VOCs, SVOCs, PCBs, and TPHs were similar, and generally low, in all four samples. Trace levels of VOCs, totaling less than 25 µg/kg, were detected in all samples, with no significant difference in concentrations between sample locations or depths. Aromatic hydrocarbons detected were benzene, toluene, and xylene. Xylene was only analyzed for in sample BCR-2/2, but had a very low concentration. The remaining VOCs detected include 1,2-dichloroethene, methylene chloride, and trichloroethene.

The only SVOCs detected were 1,2-dichlorobenzene and bis(2-ethylhexyl) phthalate. Bis(2-ethylhexyl) phthalate was also detected in the lab blank and, therefore, is interpreted to be a laboratory artifact. 1,2-dichlorobenzene was only detected above the reporting limit in one sample, BCR-2/2.

The PCBs Aroclor 1242 and Aroclor 1248 were detected above the reporting limit only in the two samples from boring location BCR-2. The concentration of PCB was low in both samples, but was slightly higher in the shallower sample (330 µg/kg Aroclor 1242 in BCR-2/1, compared with 45 µg/kg Aroclor 1248 in BCR-2/2).

TPHs, listed as total chromatographable organics in Table 1, were detected at trace levels in three of the four samples, but were not analyzed in BCR-2/2. No reliable identification of individual compounds was possible, but the samples resembled a hydrocarbon product occurring within the n-alkane range of C12-C32.

Metals detected above the reporting limit include arsenic, barium, chromium, copper, lead, nickel, and zinc. These were all present at low levels, which were generally comparable among samples. All metals except zinc had concentrations of below 100 mg/kg. Concentrations of zinc were approximately 30 mg/kg at boring location BCR-1, but an order of magnitude higher (225 to 478 mg/kg) at boring location BCR-2. Concentrations of nickel were 9.4 to 10.9 in BCR-1, but 5 to 10 times higher (52.2 to 95.2) in BCR-2. The deeper samples (BCR-1/2 and BCR-2/2) generally had slightly lower concentrations of metals than did the shallower samples (BCR-1/1 and BCR-2/1). Metals not detected above the reporting limit include cadmium, mercury, selenium, and silver.

All four samples were analyzed for cyanide, but it was not detected above the reporting limit. Only one sample (BCR-2/2) was analyzed for sulfide, but it also was not detected above the reporting limit.

The concentrations of constituents presented in Table 1 are similar to concentrations in four soil borings from outside, but near, the excavated area which were analyzed previously during Phase II of the RFI (SO/GB- 84/2, 86/2, 90/2, and 91/1). The concentrations of VOCs in the current samples (Table 1) are less than, or approximately equal to, concentrations in the previous samples. The concentrations of SVOCs, PCBs, and total petroleum hydrocarbons in the current samples are significantly lower than in the previous samples. The concentrations of metals in the current samples are generally similar to the previous samples, but chromium, copper, and nickel are significantly lower in the current samples.

5.5 DISPOSAL OF MISCELLANEOUS SOIL PILES

Three miscellaneous soil and debris piles were located on the site as shown in Figure 2. These materials remained on-site after demolition of the manufacturing building. Stanley elected to dispose of this material during BCR work as a housekeeping measure. One area was a pile of soil and concrete located northeast of monitoring well MW-B3, the second area was a pile of soil and debris located to the north of the former plating area, and

the third area was a 25-foot by 40-foot area of yellow stained soil located adjacent to the former plating area in the southwest portion of the former plant building.

Analysis of a composite sample from the three soil piles was performed by Envotech Management Services, Inc. of Belleville, Michigan. Based on this analysis the material was classified as a non-RCRA contaminated, non-hazardous substance. The soil was disposed at Wayne Disposal, Inc. of Belleville, Michigan. The disposal manifests for the material are presented as Appendix G.

5.6 BACKFILL EXISTING EXCAVATION ADJACENT TO BUILDING

During demolition of the buildings at the site in 1993, an excavation was performed east of the existing building as shown on Figure 2. During BCR activities water was removed from the excavation using a 5,000-gallon tanker truck. The water was then disposed at Dynecol, Inc. of Detroit, Michigan. The disposal manifest for this water is presented as Appendix H.

After removal of the water, the hole was lined with polyethylene sheeting and backfilled using a sandy fill material from off-site. The material was placed with a bulldozer and was lightly compacted during the backfilling process.

5.7 MISCELLANEOUS SITE GRADING

After completion of IRM and BCR work, the portion of the site west of the former manufacturing plant and east of the BCR was graded to promote positive surface water drainage.

5.8 RESTORATION

Restoration of the BCR area consisted of replacing the fencing which was removed and seeding and mulching the excavated area. Silt fence was placed along the western edge of the excavated area.

A site visit was conducted on April 27, 1995 by a representative of the LCDC. The representative indicated to OBG personnel that the restoration efforts were sufficient for release of the bond posted by OBG Tech for IRM and BCR excavation.

5.9 DECONTAMINATION PROCEDURES

Decontamination of the excavator was required after the machine contacted soils in the BCR area. During container removal activities only the bucket of the excavator contacted potentially contaminated soils surrounding the containers, therefore, only the bucket of the excavator was decontaminated. Decontamination consisted of scraping loose soil from the bucket with shovels and then washing and rinsing the bucket. Due to the small quantity of water used in decontamination of the excavator bucket, washing and rinsing operations took place over an open roll-off box, allowing rinse water to drain to the roll-off box.

6.0 CONCLUSION

The removal and disposal of buried containers, non-soil materials, and excavated soils were completed in accordance with the BCR Work Plan. Twelve deteriorated drums filled with a solid material that was characteristically hazardous for hexachlorobenzene and zinc were removed from the area of concern.

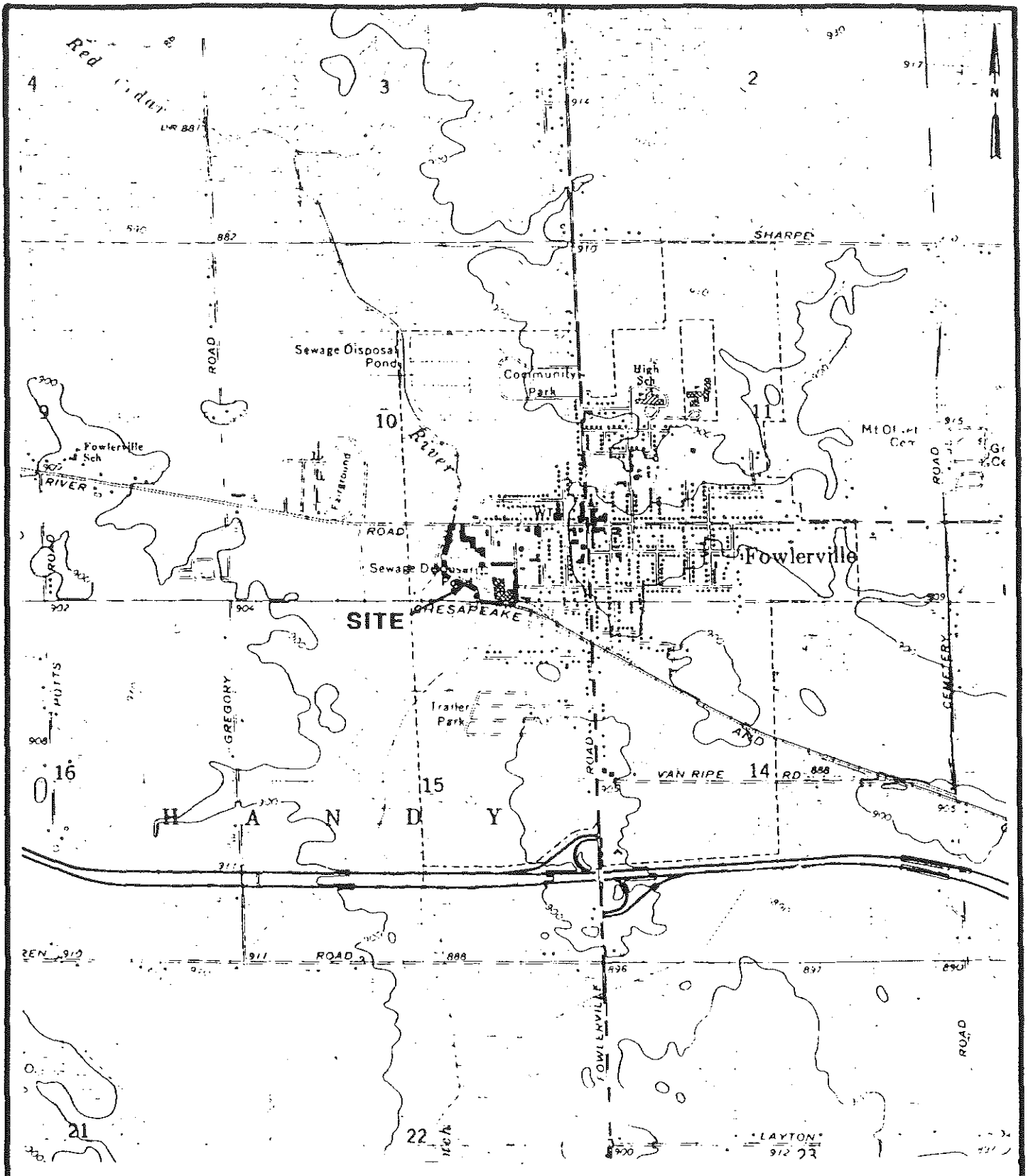
Disposal of miscellaneous soil piles, backfilling of the existing excavation east of the existing building and miscellaneous site grading were completed in accordance with the Addendum to the request for proposals dated July 15, 1994.

TABLE 1
POST-EXCAVATION SOIL ANALYSES

STANLEY TOOLS
FOWLERVILLE, MICHIGAN

Parameter	Analytical Method No.	Sample ID			
		BCR-1/1	BCR-1/2	BCR-2/1	BCR-2/2
Volatile Organic Compounds (µg/kg)					
Benzene	8240	2.2 J	2.2 J	4.8 J	5.1
1,2-Dichloroethene (total)	8240	< 6.1 U	2.6 J	< 5.0 U	< 5.0 §
Methylene chloride	8240	2.0 J	1.5 J	1.7 J	2.2 J
Toluene	8240	1.5 J	2.6 J	3.3	3.7 J
Trichloroethene	8240	< 6.1 U	< 6.4 U	< 5.O U	9.5
Xylenes (total)	8240	NA	NA	NA	1.7 J
Semivolatile Organic Compounds (µg/kg)					
1,2-Dichlorobenzene	8270	< 400 U	< 420 U	< 330 U	120 J
bis(2-Ethylhexyl) phthalate	8270	94 JB	77 JB	98 JB	86 JB
Polychlorinated Biphenyls (µg/kg)					
Aroclor 1242	8080	< 40 U	< 42 U	330	< 39 U
Aroclor 1248	8080	< 40 U	< 42 U	< 42 U	45
Total Chromatographable organics (mg/kg)	GC/FID	4.1 Jql	8.9 ql	7.0 ql	NA
Inorganics (mg/kg)					
Arsenic	7060	3.9	3.7	26.8	9.5
Barium	6010	81.5	64.8	38.8	28.3
Cadmium	6010	< 0.61 U	< 0.64 U	< 0.63 U	< 0.59 U
Chromium	6010	10.8	9.9	6.1	6.5
Copper	6010	8.1	7.2	3.6	5.7
Lead	7421	8.9	4.7	5.2	3.1
Mercury	7471	< 0.12 U	< 0.13 U	< 0.13 U	< 0.12 U
Nickel	6010	10.9	9.4	95.2	52.2
Selenium	7740	< 0.61 U	< 1.3 U	< 0.63 U	< 1.2 U
Silver	6010	< 1.2 U	< 1.3 U	< 1.3 U	< 1.2 U
Zinc	6010	30.5	30.2	478	225
Cyanide	9010/9012	< 0.61 U	< 0.64 U	< 0.63 U	< 0.59 U
Sulfide (total)	376.2 Mod.	NA	NA	NA	< 0.59 U

NA = Not analyzed.
B = Compound is also detected in the blank.
J = Result is detected below the reporting limit or is an estimated concentration.
U = Compound analyzed for but not detected above reporting limit.
q = This sample has GC/FID characteristics for which reliable identification could not be achieved.
l = Sample resembles a hydrocarbon product occurring within the n-alkane range of C12-C32.
§ = trans-1,2-Dichloroethene



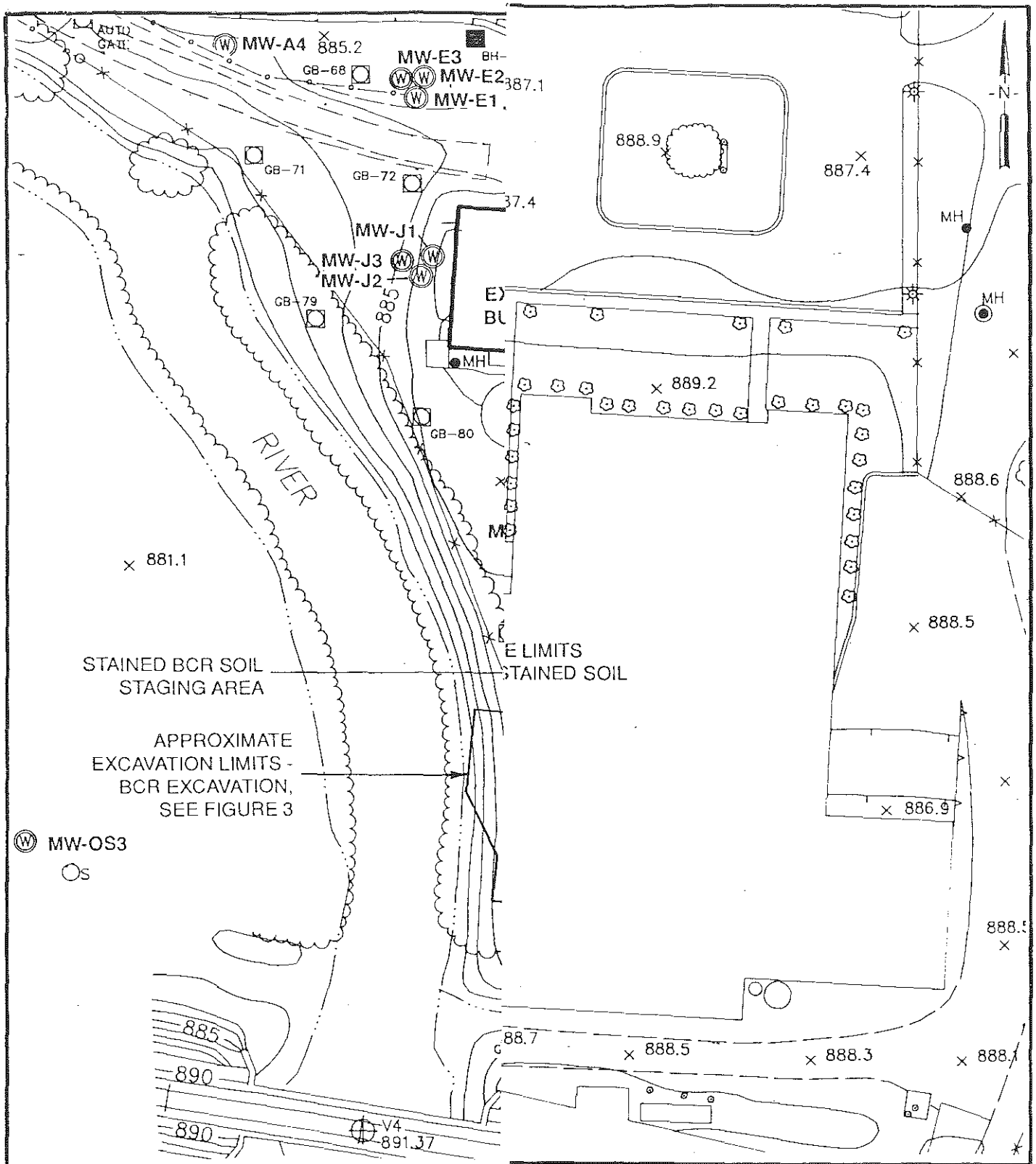
BASE MAP SOURCE: USGS 7 1/2 minute topographic quadrangle map: Fowlerville, Michigan 1973.

STANLEY TOOLS

FOWLERVILLE, MICHIGAN

FIGURE 1
SITE VICINITY MAP

JOB NO. 3163-055-148 DAMES & MOORE



STANLEY TOOLS

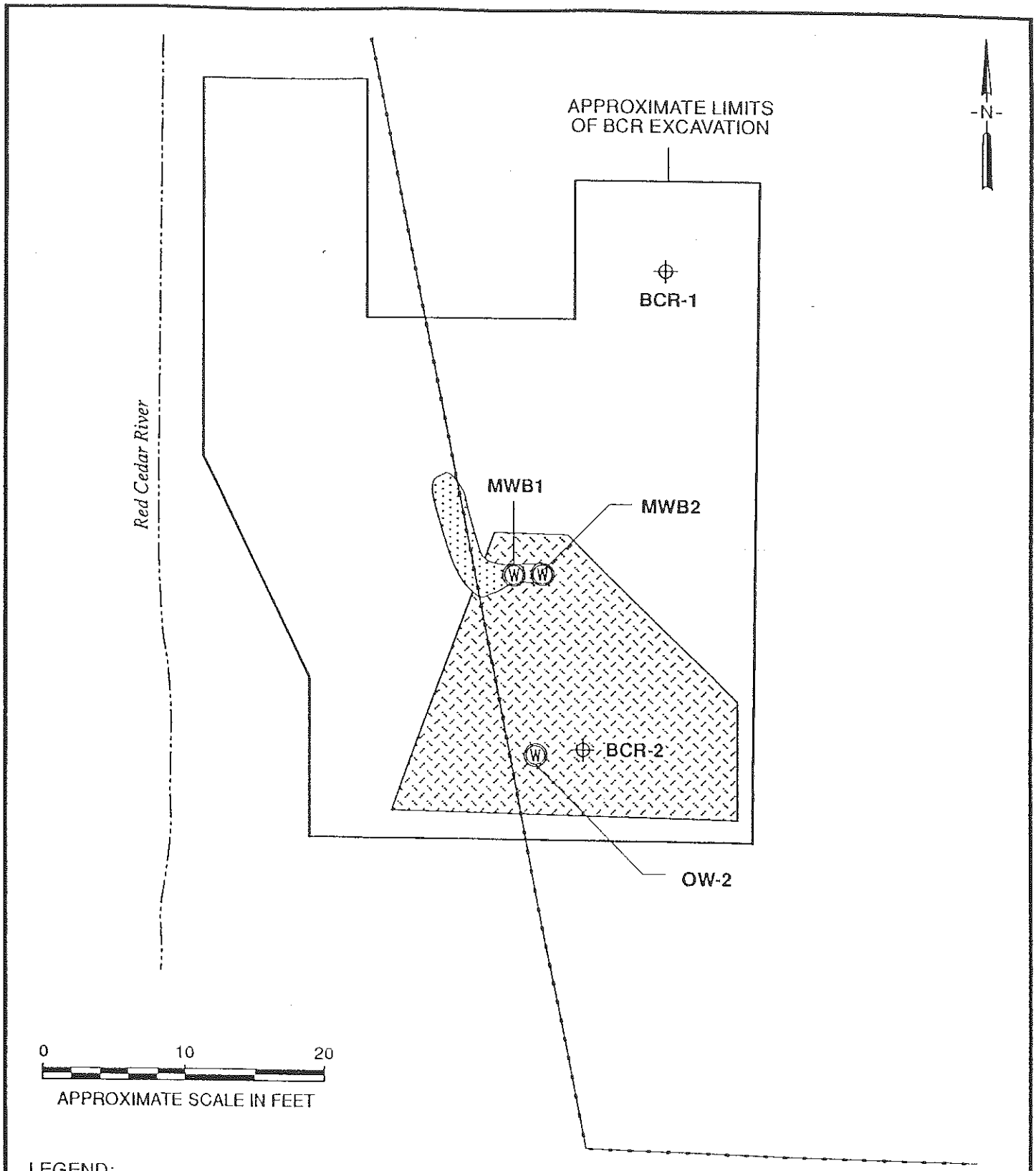
FOWLERVILLE, MICHIGAN

FIGURE 2
SITE PLAN

BASE MAP SOURCE: Hughes Land Surveyors, Fowlerville, Michigan, Stanley Tools Site, Sheet 1 of 1, January 24, 1995. Field data collected by Sokkia's SDR-33 and Wild's GRE-4 Electronic Data Collector Topography by Cadserv's Retreiver Automated Surveying and Mapping System. Base map created 09 Feb. 1994.

JOB NO. 3163-055-148

DAMES & MOORE



LEGEND:

- Soil Sampling Location
- Monitoring Well Location
- Unexcavated Area to Maintain Power Pole Guy Wire
- Location of Buried Containers

STANLEY TOOLS

FOWLERVILLE, MICHIGAN

FIGURE 3
AREA OF BCR EXCAVATION

JOB NO. 3163-055-148

DAMES & MOORE

STANLEY 14

APPENDIX A

LIVINGSTON COUNTY DRAINAGE PERMIT

LIVINGSTON COUNTY

SOIL EROSION AND SEDIMENTATION CONTROL
ENFORCING AGENCY

GRADING PERMIT

ISSUED TO: Mark Sydorowych
(OWNER)

TO PERFORM GRADING AND EROSION CONTROL WORK

AT The old Stanley Industrial Site, In th Village of Fowlerville
(LOCATION)

THE OWNER HAS AGREED TO COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF LIVINGSTON COUNTY AND TO DO NO WORK NOT SPECIFICALLY COVERED BY THIS PERMIT.

DATE November 04, 1994 NO. 8836 (Eight Thousand Thirty Six)

THIS CARD MUST BE CONSPICUOUSLY
POSTED ON THE WORK SITE

LIVINGSTON COUNTY DRAIN COMMISSIONER
PERMIT

Under the Soil Erosion and Sedimentation Control P.A. 347 of 1972

Permit#: Eight Hundred Thirty Six (#836)

Date Issued: November 04, 1994

Expiration Date: November 04, 1995

Under the provisions of Act 347, P. A. 1972, authority is hereby granted to, Mark Sydorowych, (O'brien Gere Technical Services) To perform neccessery grade work from start to finish for the Removal of Contaminated soils and stabilization of soils disturbed during this procces.

Located in Township of Handy, Village of Fowlerville , Livingston County, Michigan, Section #10 , T3N - R3E.

Work to be done under authority of this permit shall be done in a workmanlike manner in accordance with the approved prints and specifications as prepared by Dames & Moore. as attached, and is subject to the following special restrictions, limitation and instructions :

1. Notify Livingston County Drain Commissioners Office 24Hrs prior to start of grade work.

2. In accordance with Public Act No. 53, of 1974 the permit holder shall call Miss Dig for staking and locating of utilities, at least 72 hours in advance of the start of any work.

REMEMBER ! "BEFORE YOU DIG CALL MISS DIG"

3. Silt fabric fence shall be placed along perimeter on all low lying areas of construction site to filter runoff before leaving project.

4. All temporary erosion control devices shall be installed prior to the start of massive earth disruption.

5. If Plan does not denote a detailed erosion control device to restrict tracking of material onto the highway. Stone diapers shall be installed at all ingress/egress areas of the site prior to the start of massive earth disruption. Diapers shall be of crushed stone and shall be a minimum of 75' in length.

6. All unimproved disturbed areas shall be stripped of topsoil which will be stored on site during the excavating stage. Topsoil piles shall be seeded and mulched, or matted with straw in the non-growing season, immediately after the stripping process, to prevent wind and water erosion.

7. Soil erosion controls shall be monitored daily by the on-site engineer, or contractor, which ever case applies.

8 On site ditches shall be of the flat bottom type minimum width of 2' with a minimum of 3 horizontal to 1 vertical side slopes, 3:1.

9. Steep slopes will need flow checks to prevent scouring of the ditch bottoms. These shall be installed as directed by the engineer or inspector.

10. Slopes in excess of 3 horizontal to 1 vertical shall not be used except with a mechanical device such as a retaining wall, terracing, or other prior approved device.

11 All storm drain outlets that do not empty into the retention/detention pond shall have a temporary 5'x10'x3' sump installed at the termination of the storm sewer. Upon completion of the stabilization work the sump area shall be filled and rip rapped with cobble stone. Silt traps shall be inspected after each storm

12 Storm water outlets must have rip rap. All outlets shall be rip rapped with a minimum of 15 sq. yards of 6" or larger cobble stone.

13. Rip-rap shall be of cobble stone, 6" in diameter or larger. Grouting may be necessary, and shall be a minimum of 6" in depth with the cobble set in the cement slurry.

14. All unimproved disturbed areas shall be re-top soiled, with a minimum of 3" of material, seeded, mulched and tacked within 15 days of the completion of the massive earth disruption. In the non-growing season straw matting will suffice. Hydroseeding will be an acceptable alternate for mulching. Extreme care should be exercised in spring and fall periods as a frost will break the bind of the hydroseeding, which will affect the effectiveness of this procedure.

15. In the non growing season, temporary stabilization of massively exposed areas for winter stabilization shall be done with straw matting.

16. Permit fees during the winter period of non construction, (December 1 thru March 31), shall not be imposed if the permit holder temporarily stabilizes the exposed areas with straw matting, and other approved controls, and obtains a winter stabilization certificate from this office.

17. Periodic inspections will be made throughout the course of the project. It will be the responsibility of the managers of the project to contact this office for the final inspection at the end of the project.

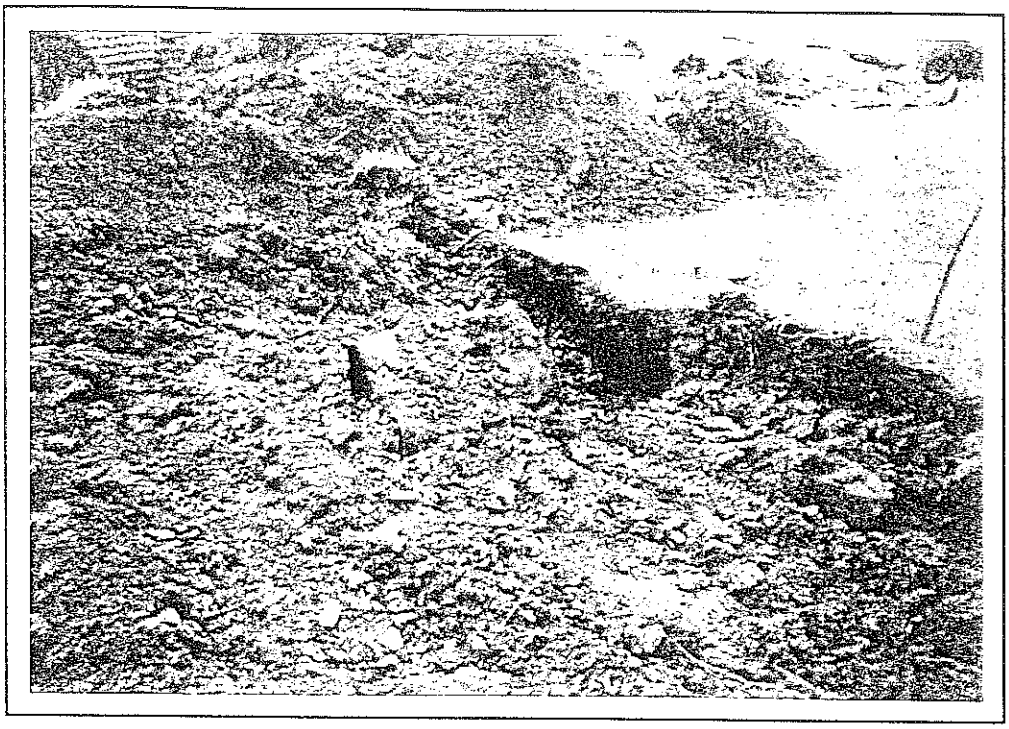
Sincerely,

Mark T. Hathaway
Environmental Inspector

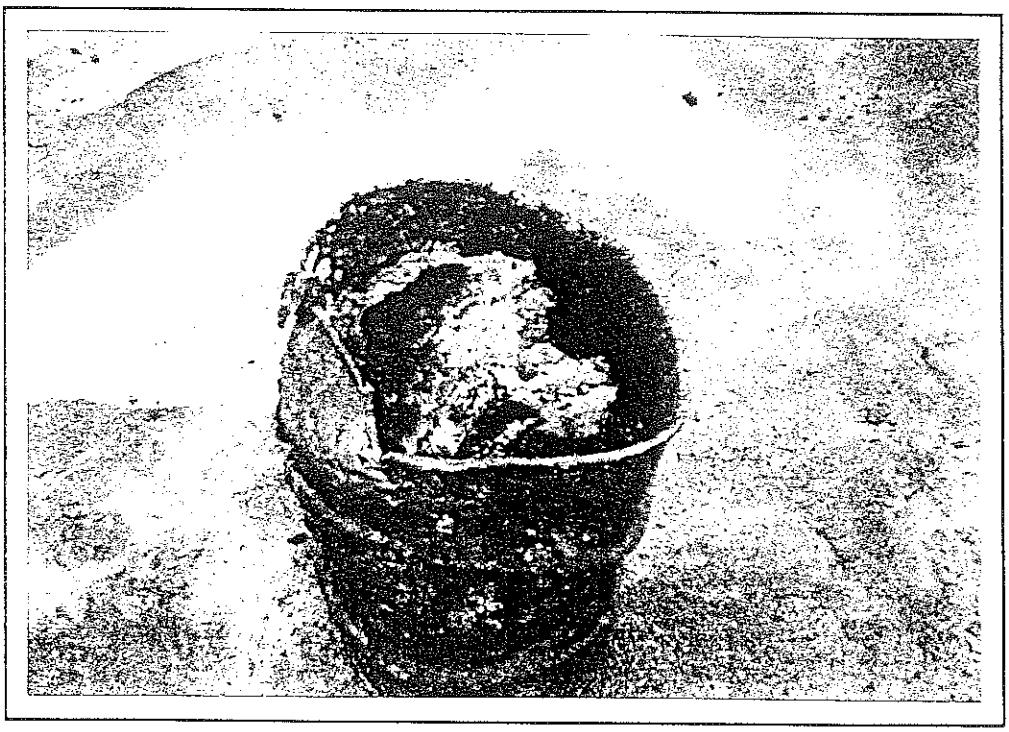
cc/ Village of Fowlerville
File

APPENDIX B

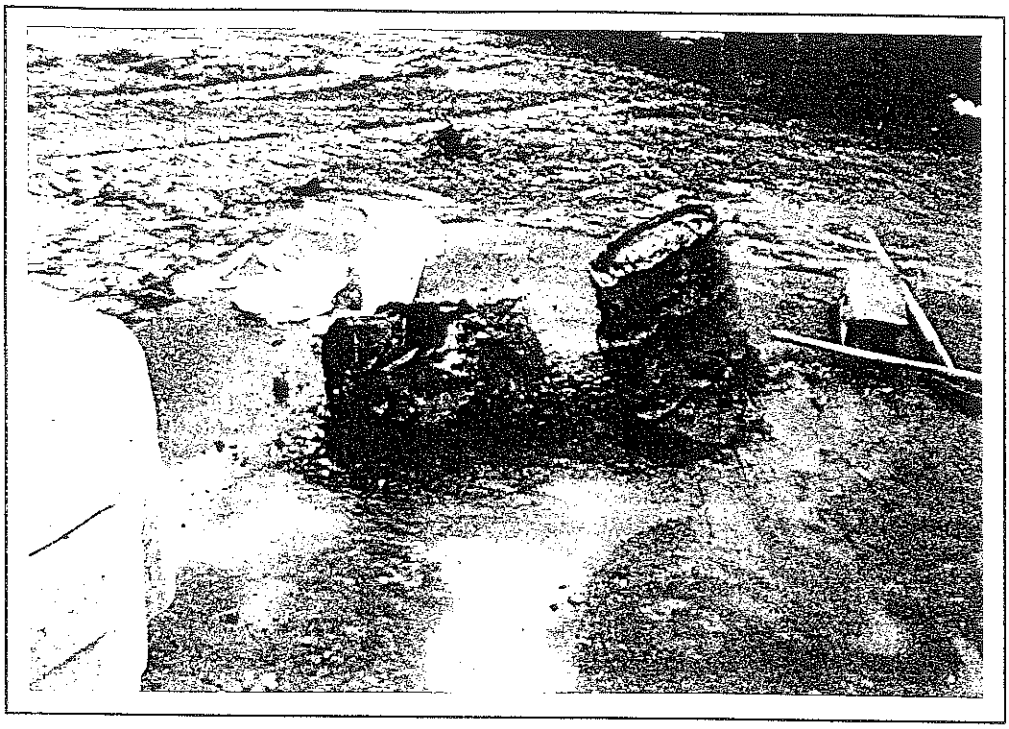
PHOTOGRAPHS



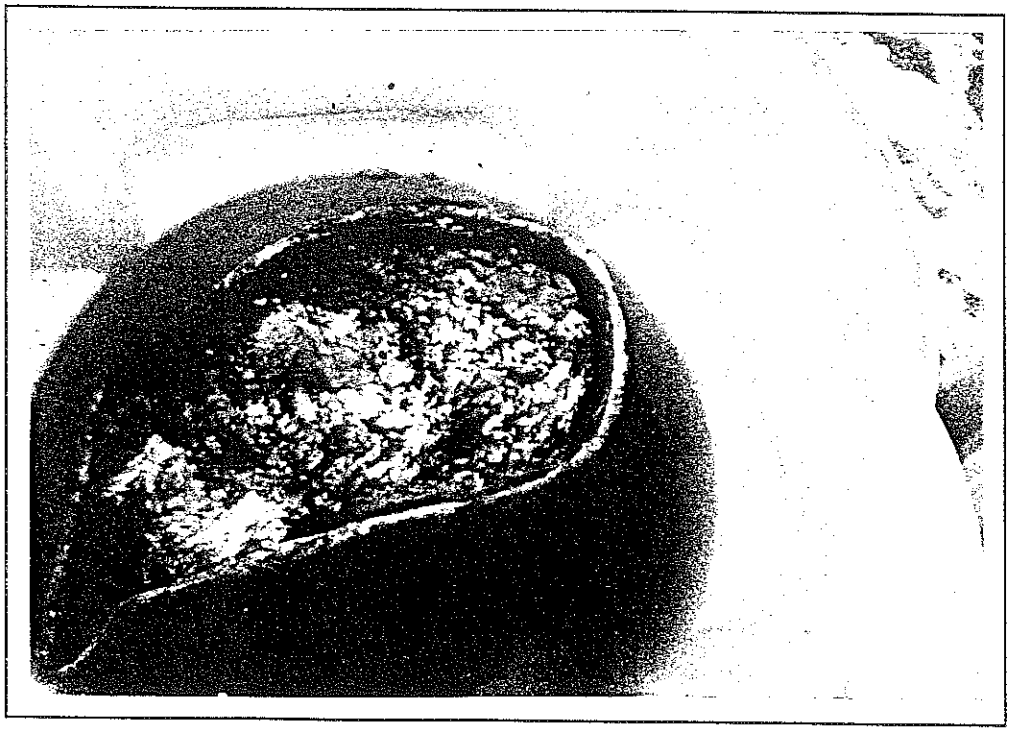
PHOTOGRAPH 1: Typical drum found in BCR excavation.



PHOTOGRAPH 2: Drum removed from excavation, contents are typical of all drums removed.



PHOTOGRAPH 3: Typical drums after removal from excavation.



PHOTOGRAPH 4: Drum placed in overpack.

APPENDIX C

BURIED CONTAINER PHYSICAL INFORMATION SHEETS

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-1 Date 4-18-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	X
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	BLACK/GRAY
Liquid	X
Viscosity	WATER
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. _____

Photographed

Yes X No ___ Number _____

Comments

Signed: James Apa Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-2
Grid Section ID _____

Date 4-18-95
Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM

Comments:

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	BLACK/GRAY
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number ___

Comments

Signed: James E Spe

Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-3 Date 4-18-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	GRAY/BLACK
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number _____

Comments

Signed James Dyer Date: 4-18-95

P-11

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-4 Date 4-18-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	WHITE/RED
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number _____

Comments

Signed: James Hyer Date: 4-18-95

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-5 Date 4-18-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	GRAY/RUST
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number _____

Comments

Signed: [signature] Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-6 Date 4-18-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	BLACK/GRAY
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number _____

Comments

Signed: James Stp Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-7 Date 4-18-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM

Comments:

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	GRAY/BLACK
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number _____

Comments

Signed: James Clyce Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-8 Date 4-18-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	BLACK/BROWN
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number _____

Comments

Signed: James Edgar Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-9
Grid Section ID

Date 4-18-95
Removed Yes X No

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No

Color	BLACK/ BROWN
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary
Secondary

Labels or Marks

Labels or Marks Yes No X

Labels Photographed Yes No Nos.

Photographed

Yes X No Number

Comments

Signed: James Eby

Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-10
Grid Section ID _____

Date 4-18-95
Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown	___	Intact	
55 gal.	X	Leaking	
30 gal.	___	Disintegrating	X
Other	___	Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	21 PPM

Comments:

Type		*Opening*	
Unknown	___	Ringtop	
Metal	X	Bungs	
Plastic	___	No top	X
Fiber	___	Other	
Other	___		

Material Screening Data

Container Contents Yes X No ___

Color	BLACK/GRAY
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. _____

Photographed

Yes X No ___ Number _____

Comments

Signed: [signature] Date: 4-18-95

P-H

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-11
Grid Section ID _____

Date 4-20-95
Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM

Comments:

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	GRAY/BLACK
Liquid	
Viscosity	
Solid	
Sludge	
Texture	
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number ___

Comments

Signed: James Spl

Date: 4-20-95

P-II

TABLE 1

STANLEY TOOLS - CONTAINER REMOVAL
NON-SOIL MATERIAL INFORMATION SHEET

ID Number BCR-12 Date 4-20-95
Grid Section ID _____ Removed Yes X No ___

Material Type

Container	X
Scrap metal or debris	
Broken concrete	
Other	

Container Information

Size		*Condition*	
Unknown		Intact	
55 gal.	X	Leaking	
30 gal.		Disintegrating	X
Other		Empty	

Surrounding Soil

Clean	
Slight discoloration	
Totally discolored	X
PID reading	<1 PPM
Comments:	

Type		*Opening*	
Unknown		Ringtop	
Metal	X	Bungs	
Plastic		No top	X
Fiber		Other	
Other			

Material Screening Data

Container Contents Yes X No ___

Color	BLACK/GRAY
Liquid	
Viscosity	
Solid	X
Sludge	
Texture	PASTE
Other	

Color

Primary _____
Secondary _____

Labels or Marks

Labels or Marks Yes ___ No X

Labels Photographed Yes ___ No ___ Nos. ___

Photographed

Yes X No ___ Number _____

Comments

Signed: James E Sparber Date: 4-20-95

P-H

APPENDIX D

STAINED BCR SOIL AND DRUM MATERIAL ANALYSIS

ENVOTECH MANAGEMENT SERVICES, INC.
ANALYTICAL LABORATORY
49350 N. I-94 SERVICE DRIVE
BELLEVILLE, MI. 48111

April 27, 1995

Soil Column Composite

O'Brien & Grere Technical Svcs.
700 West Johnson Ave. Suite 101
Cheshire, CT 06410-1135

Dear: O'Brien Svcs.:

Below are results of analysis of the sample received for examination on April 24, 1995:

Sample I.D. AA02775 CLIENT CODE: 000
Purchase order number: VERBAL Tracking number: 5095
Generator name: Stanley Tool Workers
Waste Name: SOIL COMPOSITE
Sample collection date: 04/24/95 Time: 08:55
Lab submittal date: 04/24/95 Time: 08:55

TEST PARAMETER	UNITS	TEST RESULT	DETECTI LIMIT
FLASHPOINT	DEG F	>140	1
PH	SI UNITS	7.31	0.10
REACTIVE SULFIDE	MG/KG	<100	100
TOTAL CYANIDE	MG/KG	0.68	0.50
Multicomponent analysis: TCLP METALS--RCRA/MDNR LIST			
SELENIUM	MG/L	Less than	0.10
ARSENIC	MG/L	Less than	0.06
ANTIMONY	MG/L	Less than	0.10
ZINC	MG/L	585	0.10
LEAD	MG/L	0.14	0.04
CADMIUM	MG/L	0.22	0.01
BARIUM	MG/L	2.99	0.01
BERYLLIUM	MG/L	Less than	0.0005
CHROMIUM	MG/L	0.16	0.01
VANADIUM	MG/L	Less than	0.10
COPPER	MG/L	6.40	0.01
SILVER	MG/L	0.01	0.01
NICKEL	MG/L	10	0.08
THALLIUM	MG/L	Less than	0.10
MERCURY	MG/L	Less than	0.005
Multicomponent analysis: ORGANIC TCLP-ZHE,BNA,HERBS,PESTS			
1,4-Dichlorobenzene	MG/L	Less Than	0.10
MEK	MG/L	Less Than	0.10
Chloroform	MG/L	Less Than	0.10
Benzene	MG/L	Less Than	0.10
Carbon Tetrachloride	MG/L	Less Than	0.10
1,2-Dichloroethane	MG/L	Less Than	0.10
1,1-Dichloroethylene	MG/L	Less Than	0.20

O'Brien & Grere Technical Svcs. Sample I.D. AA02775 (continued)
Page: 2
April 27, 1995

TEST PARAMETER	UNITS	TEST RESULT	DETECTIC LIMIT
Multicomponent analysis: ORGANIC TCLP-ZHE,BNA,HERBS,PESTS (continued)			
Vinyl Chloride	MG/L	Less Than	0.10
Trichloroethylene	MG/L	Less Than	0.09
Tetrachloroethylene	MG/L	Less Than	0.05
Chlorobenzene	MG/L	Less Than	0.05
1,4-Dichlorobenzene	MG/L	Less Than	0.50
2,4-Dinitrotoluene	MG/L	Less than	0.10
Hexachlorobenzene	MG/L	0.15	0.10
Hexachloroethane	MG/L	Less Than	0.10
Nitrobenzene	MG/L	Less Than	0.50
Pyridine	MG/L	Less Than	1.0
Hexachlorobutadiene	MG/L	Less Than	0.50
o-Cresol	MG/L	Less Than	10
m-Cresol	MG/L	Less Than	10
p-Cresol	MG/L	Less Than	10
Cresol	MG/L	Less Than	10
Pentachlorophenol	MG/L	Less Than	10
2,4,5-Trichlorophenol	MG/L	Less Than	10
2,4,6-Trichlorophenol	MG/L	Less Than	1
Chlordane	MG/L	Less Than	0.01
Endrin	MG/L	Less Than	0.01
Heptachlor	MG/L	Less Than	0.006
Heptachlor epoxide	MG/L	Less Than	0.006
Lindane	MG/L	Less Than	0.01
Methoxychlor	MG/L	Less Than	1
Toxaphene	MG/L	Less Than	0.3
Silvex	MG/L	Less Than	1
2,4-D	MG/L	Less Than	1
Multicomponent analysis: TOTAL PCB			
AROCLOR 1016	MG/KG	LESS THAN	1.0
AROCLOR 1221	MG/KG	LESS THAN	1.0
AROCLOR 1232	MG/KG	LESS THAN	1.0
AROCLOR 1242	MG/KG	LESS THAN	1.0
AROCLOR 1248	MG/KG	LESS THAN	1.0
AROCLOR 1254	MG/KG	LESS THAN	1.0
AROCLOR 1260	MG/KG	LESS THAN	1.0
TOTAL PCBS	MG/KG	LESS THAN	1.0

Please advise should you have questions concerning these data.

Respectfully submitted,

CHARLES E. ROBERTS
QA/QC OFFICER

BELINDA PERO
LAB MANAGER

ENVOTECH MANAGEMENT SERVICES, INC.
ANALYTICAL LABORATORY
49350 N. I-94 SERVICE DRIVE
BELLEVILLE, MI. 48111

April 27, 1995

O'Brien & Grere Technical Svcs.
700 West Johnson Ave. Suite 101
Cheshire, CT 06410-1135

Soil Composite

Dear: O'Brien Svcs.:

Below are results of analysis of the sample received for examination on April 24, 1995:

Sample I.D. AA02774 CLIENT CODE: 000
Purchase order number: VERBAL Tracking number: 5096
Generator name: Stanley Tool Workers
Waste Name: SOIL COMPOSITE
Sample collection date: 04/24/95 Time: 08:55
Lab submittal date: 04/24/95 Time: 08:55

TEST PARAMETER	UNITS	TEST RESULT	DETECTI LIMIT
FLASHPOINT	DEG F	>140	1
PH	SI UNITS	7.23	0.10
REACTIVE SULFIDE	MG/KG	<100	100
TOTAL CYANIDE	MG/KG	<0.5	0.50
Multicomponent analysis: TCLP METALS--RCRA/MDNR LIST			
SELENIUM	MG/L	Less than	0.10
ARSENIC	MG/L	Less than	0.06
ANTIMONY	MG/L	Less than	0.10
ZINC	MG/L	201	0.10
LEAD	MG/L	Less than	0.04
CADMIUM	MG/L	Less than	0.01
BARIUM	MG/L	2.2	0.01
BERYLLIUM	MG/L	Less than	0.0005
CHROMIUM	MG/L	0.01	0.01
VANADIUM	MG/L	Less than	0.10
COPPER	MG/L	4.9	0.01
SILVER	MG/L	0.01	0.01
NICKEL	MG/L	7	0.08
THALLIUM	MG/L	Less than	0.10
MERCURY	MG/L	Less than	0.005
Multicomponent analysis: ORGANIC TCLP-ZHE,BNA,HERBS,PESTS			
1,4-Dichlorobenzene	MG/L	Less Than	0.10
MEK	MG/L	Less Than	0.10
Chloroform	MG/L	Less Than	0.10
Benzene	MG/L	Less Than	0.10
Carbon Tetrachloride	MG/L	Less Than	0.10
1,2-Dichloroethane	MG/L	Less Than	0.10
1,1-Dichloroethylene	MG/L	Less Than	0.20

O'Brien & Grere Technical Svcs. Sample I.D. AA02774 (continued)
Page: 2
April 27, 1995

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: ORGANIC TCLP-ZHR,BNA,HERBS,PESTS (continued)			
Vinyl Chloride	MG/L	Less Than	0.10
Trichloroethylene	MG/L	Less Than	0.09
Tetrachloroethylene	MG/L	Less Than	0.05
Chlorobenzene	MG/L	Less Than	0.05
1,4-Dichlorobenzene	MG/L	Less Than	0.50
2,4-Dinitrotoluene	MG/L	Less Than	0.10
Hexachlorobenzene	MG/L	Less Than	0.10
Hexachloroethane	MG/L	Less Than	0.10
Nitrobenzene	MG/L	Less Than	0.50
Pyridine	MG/L	Less Than	1.0
Hexachlorobutadiene	MG/L	Less Than	0.50
o-Cresol	MG/L	Less Than	10
m-Cresol	MG/L	Less Than	10
p-Cresol	MG/L	Less Than	10
Cresol	MG/L	Less Than	10
Pentachlorophenol	MG/L	Less Than	10
2,4,5-Trichlorophenol	MG/L	Less Than	10
2,4,6-Trichlorophenol	MG/L	Less Than	1
Chlordane	MG/L	Less Than	0.01
Endrin	MG/L	Less Than	0.01
Heptachlor	MG/L	Less Than	0.006
Heptachlor epoxide	MG/L	Less Than	0.006
Lindane	MG/L	Less Than	0.01
Methoxychlor	MG/L	Less Than	1
Toxaphene	MG/L	Less Than	0.3
Silvex	MG/L	Less Than	1
2,4-D	MG/L	Less Than	1
Multicomponent analysis: TOTAL PCB			
AROCLOR 1016	MG/KG	LESS THAN	1.0
AROCLOR 1221	MG/KG	LESS THAN	1.0
AROCLOR 1232	MG/KG	LESS THAN	1.0
AROCLOR 1242	MG/KG	LESS THAN	1.0
AROCLOR 1248	MG/KG	LESS THAN	1.0
AROCLOR 1254	MG/KG	LESS THAN	1.0
AROCLOR 1260	MG/KG	LESS THAN	1.0
TOTAL PCBS	MG/KG	LESS THAN	1.0

Please advise should you have questions concerning these data.

Respectfully submitted,

Charles E Roberts

CHARLES E. ROBERTS
QA/QC OFFICER

BELINDA PERO
LAB MANAGER

APPENDIX E

BCR SOIL DISPOSAL MANIFESTS

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979 as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 12527
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlervill, Mi 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450819
B. State Generator's ID: 06053

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: MID106869506
C. State Transporter's ID
D. Transporter's Phone (810) 789-7155

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: MID048090633
G. State Facility's ID
H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. Contaminated Soil, NHCS, Non-RCRA, Non-Hazardous	001	DT	00020	Y		
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #52595WA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month 06 Day 02 Year 95

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman — Signature: [signature] — Date: Month 06 Day 02 Year 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date: Month Day Year

GENERATOR — TRANSPORTER — FACILITY

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

To be mailed by Generator to: Michigan DNR, Box 30038, Lansing, MI 48909

PR 5110 Rev. 10/

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type. Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: M I D 0 9 9 1 2 4 2 9 9 — Manifest Document No.: TN5[illegible]
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450819
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone (810) 789-7155
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: M I D 1 0 6 8 6 9 5 0 6
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: M I D 0 4 8 0 9 0 6 3 3

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	Contaminated Soil, NMCS, Non-RCRA, Non-Hazardous	001	DT	00020	Y		
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595MA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hittman — Signature: [illegible] — Date: Month Day Year: 06 02 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date: Month Day Year

GENERATOR — TRANSPORTER — FACILITY

FILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) PR 5110 Rev. 10/9

GENERATOR 1st COPY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ: ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 Manifest Document Nr.: 12525

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley DR., New Britian, CT 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450813

B. State Generator's ID

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.

6. US EPA ID Number: MID106869506

C. State Transporter's ID

D. Transporter's Phone (810) 789-7155

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111

10. US EPA ID Number: MID048090633

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	Contaminated Soil, NHCS, Non RCRA, Non-Hazardous	001	DT	00020	Y		
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595WA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Year: 06 02 9[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman
Signature: [signature]
Date: Month Day Year: 06 02 9[illegible]

18. Transporter 2. Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

To be mailed by Generator: Michigan DNR Box 30038 Lansing, MI 48909

PR 5110
Rev. 10/

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1970, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

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Form Approved. OMB No. 2050-0039 Expires 9-30-8

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 — Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fonterville, MI 48836

Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britian, CT 06053

4. Generator's Phone (203) 827-3802

5. Transporter 1 Company Name
Young's Environmental Cleanup, Inc.

6. US EPA ID Number M I D 1 0 6 6 9 5 0 6

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111

10. US EPA ID Number M I D 0 5 4 0 6 9 0 6 3 3

A. State Manifest Document Number MI 3450813

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone (616) 788-7155

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No. N/H
a.	Contaminated Soil, NOS, Non RCRA, Non-Hazardous	001	BT	020	Y	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #5295MA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name | Signature | Date Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Stephen Hoffman | Signature | Date Month Day Year: 09 02 95

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name | Signature | Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Date Month Day Year

GENERATOR

TRANSPORTER

FACILITY

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

GENERATOR 1st COPY

PR 5110 Rev. 10/9

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 — Manifest Document No. 12524

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450814

B. State Generator's ID

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.

6. US EPA ID Number: M I D 1 0 6 8 6 9 5 0 6

C. State Transporter's ID

D. Transporter's Phone (810) 789-7155

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111

10. US EPA ID Number: M I D 0 4 8 0 9 0 6 3 3

G. State Facility's ID

H. Facility's Phone

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	Contaminated Soil, NHCS, Non-RCRA, Non-Hazardous	001	DT	00020	Y	0124	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595Wa

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year 06 01 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman — Signature: [signature] — Date: Month Day Year 06 01 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date: Month Day Year

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) — To be mailed by Generator to: Michigan DNR Box 30038 Lansing, MI 48909 — PR 5110 Rev. 10/9

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 2224

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

4. Generator's Phone (203) 827-3882

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: MID106869506

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: MID048090633

A. State Manifest Document Number: MI 3450814
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone (810) 789-7155
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	Contaminated Soil, NMCS, Non-RCRA, Non-Hazardous	001	DT	00020	Y	0296	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595Ma

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: [illegible] | Signature: [illegible] | Date Month Day Year: 06 11 95

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman | Signature: [illegible] | Date Month Day Year: 06 11 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: | Signature: | Date Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: | Signature: | Date Month Day Year:

GENERATOR

TRANSPORTER

FACILITY

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

PR 5110
Rev. 10/9

GENERATOR 1st COPY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979 as amended ... 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 Manifest Document No.: 12623
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3450815
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone (810) 789-7155
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: MID106869506
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N I-94 Service Dr.
Belleville, MI 4811 1
10. US EPA ID Number: MID048090633

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/
a.	Contaminated Soil, NHCS, Non-RCRA, Non-hazardous	001	DT	20	Y		
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595WA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month 06 Day 01 Year 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman
Signature: Stephen Hoffman
Date: Month 06 Day 01 Year 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

To be mailed by Generator to: Michigan DNR, Box 30038, Lansing, MI 48909

PR 511
Rev. 10

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MI 0 0 0 9 1 2 4 2 9 9 — Manifest Document No.: 10223
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

4. Generator's Phone ( )

A. State Manifest Document Number: MI 3450815
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone (810) 789-7156
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: MID 1 0 6 8 6 9 5 0 8
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: MID 0 4 8 0 9 0 6 3 3

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	Contaminated Soil, NRCS, Non-RCRA, Non-hazardous	001	DT	00020	Y		
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595NA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: [illegible] | Signature: [signature] | Date (Month Day Year): 06 [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman | Signature: [signature] | Date (Month Day Year): 06 01 95

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Date (Month Day Year)

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Date (Month Day Year)

GENERATOR / TRANSPORTER / FACILITY

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, HIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)
PR 5110 Rev. 10/9

GENERATOR 1st COPY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 — Manifest Document No. 10201

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT. 06053

A. State Manifest Document Number: MI 3450817

B. State Generator's ID

4. Generator's Phone (203) 827-3802

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.

6. US EPA ID Number: M I D 1 0 6 8 6 9 5 0 6

C. State Transporter's ID

D. Transporter's Phone (810) 78907155

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111

10. US EPA ID Number: M I D 0 4 8 0 9 0 6 3 3

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. Contaminated Soil, NHCS, Non-RCRA, Non-Hazardous	001	DT	00020	Y	0096	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #52595WA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON — Signature: John E Chaperon — Date: Month Day Year 10 31 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: LANNY T. HOWARD — Signature: Lanny Howard — Date: Month Day Year 10 31 95

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Date: Month Day Year

GENERATOR

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, I... ...CHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) To be mailed by ... Michigan DNR Box 30028 ... 48909

PR 5110 Rev. 10/9

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: M I 0 0 9 9 1 2 4 2 9 9 — Manifest Document No.:
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mailing: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT. 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450817
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: (810) 78907155
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone:

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: M I D 1 0 6 8 6 9 5 0 6
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: M I 0 0 4 8 0 9 0 6 3 3

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/I
a.		Contaminated Soil, RHCS, Non-RCRA, Non-Hazardous	001	DT	[illegible]	/	[illegible]	
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #52595HA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, ... MICHIGAN AT 1-800-292-4708 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY

EPA Form 8700-22 (Rev. 9/88)

PR 511
Rev. 10

GENERATOR 1st COPY

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979 as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 o Act 136, PA. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MID099124299 Manifest Document No. 12322

2. Page 1 of 1

Information in the shaded areas is not required by Federa law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number MI 3450816

B. State Generator's ID

5. Transporter 1 Company Name
Young's Environmental Cleanup, Inc

6. US EPA ID Number MID106869506

C. State Transporter's ID

D. Transporter's Phone (810) 789-7155

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111

10. US EPA ID Number MID048090633

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	Contaminated soil, NHCS, Non-RCRA, Non-hazardous	001	DT	00020	Y	0296
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #52595WA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

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Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Yea 05 31 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman
Signature: [signature]
Date: Month Day Yea 05 31 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Yea

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Yea

GENERATOR

TRANSPORTER

FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

To be mailed by Generator to: Michigan DNR Box 30038 Lansing, MI 48909

PR 51 Rev. 1

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

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Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MIDOS911242998 Manifest Document No. 3450816 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools Mail to: William Guerrera
425 Frank St., Fowlerville, MI 48836 The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

A. State Manifest Document Number MI 3450816

B. State Generator's ID

4. Generator's Phone (283) 827-3002

5. Transporter 1 Company Name: Tommy's Environmental Cleanup, Inc.
6. US EPA ID Number: MIDOO6869506

C. State Transporter's ID

D. Transporter's Phone (810) 798-7155

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: MID048090633

G. State Facility's ID

H. Facility's Phone

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/F
a.	Contaminated soil, NOS, Non-RCRA, Non-hazardous	001	T	00120	Y	02916	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #525951M

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

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GENERATOR

Printed/Typed Name: Tom Emerson — Signature — Date: Month 11 Day 1 Year 1

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hoffman — Signature — Date: Month 11 Day 1 Year 1

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name — Signature — Date

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) PR 5110 Rev. 10/

GENERATOR 1st COPY

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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1979 as amended and Act 136 P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M I D 0 9 9 1 2 4 2 9 9 — Manifest Document No. 10324

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

Stanley Tools
425 Frank St., Fowlerville, MI 48836

Mail to: William Guerrera
The Staley Works
1000 Stanley Dr., New Britian, Ct 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450812

B. State Generator's ID

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc

6. US EPA ID Number: M I D 1 0 6 8 6 9 5 0 6

C. State Transporter's ID

D. Transporter's Phone (810) 789-7155

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111

10. US EPA ID Number: M I D 0 4 8 0 9 0 6 3 3

G. State Facility's ID

H. Facility's Phone

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	Soil, NHCS, Non RCRA Contaminated, Non-hazardous	0 0 1	D T	0 0 2 0	Y	0 2 9 L	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

Approval #52595 WA

K. Handling Codes for Wastes Listed Above

a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: JOHN E. CHAPERON — Signature: John E. Chaperon — Date: Month 05 Day 31 Year 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Stephen Hoffman — Signature: [signature] — Date: Month 05 Day 31 Year 1995

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Date: Month Day Year

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM AT 517-373-7660 OR OUT OF STATE AT 1-800-292-4706 OR IN MICHIGAN AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

To be mailed by Generator to Michigan DNR Box 30038 Lansing MI 48909

PR 5110 Rev. 10/9

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: M 1 0 0 9 9 1 2 4 2 9 9
Manifest Document No.: 1 2 3 4
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Staley Works
1000 Stanley Dr., New Britian, Ct 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450812
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone (810) 789-7155
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone:

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc
6. US EPA ID Number: M 1 0 1 0 6 8 6 9 5 0 6
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address
Wayne Disposal, Inc.
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: M 1 0 0 4 8 0 9 0 6 3 3

GENERATOR

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	Soil, NMCS, Non RCRA Contaminated, Non-hazardous	0 0 1	BT	00020	Y	0294	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595 MA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled, dike area, contain in drums, call CHEMTREC 800-424-9300.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon
Signature:
Date: Month Day Year: 05 11 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Stephen Hottman
Signature:
Date: Month Day Year: 05 11 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name:
Signature:
Date: Month Day Year:

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, HIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)
PR 5110
Rev. 10/92

GENERATOR 1st COPY

APPENDIX F

BCR DRUM DISPOSAL MANIFESTS

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979 as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 Manifest Document No.: 10380
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain,

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450811

B. State Generator's ID: CT 06053

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: MID106869506

C. State Transporter's ID

D. Transporter's Phone (810) 789-7155

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Michigan Disposal
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: MID000724831

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	XX	RQ, Hazardous Waste, Solid, n.o.s (Hexachlorobenzene & Zinc), 9, NA3077, PGIII	012	DF	00660	G	D032	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above
Approval #52595MC
Also: 003D

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled dike area, contain in drums call CHEMTREC 800-424-9300. Refer to ERG #31

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN E. CHAPERON
Signature: John E. Chaperon
Date: Month 05 Day 31 Year 95

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Scott Smith
Signature: Scott Smith
Date: Month 05 Day 31 Year 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

...L SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

To be mailed by Generator to: Michigan DNR, Box 30038, Lansing, MI 48909

PR 5110
Rev. 10/9

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.
Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.:
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St., Fowlerville, MI 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Dr., New Britain, CT 06053

4. Generator's Phone (203) 827-3882

A. State Manifest Document Number: MI 3450811
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone (810) 789-7155
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone:

5. Transporter 1 Company Name: Young's Environmental Cleanup, Inc.
6. US EPA ID Number: MID106869506
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address
Michigan Disposal
49350 N. I-94 Service Dr.
Belleville, MI 48111
10. US EPA ID Number: MID000724031

GENERATOR

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/A
a. XX	RQ, Hazardous Waste, Solid, n.e.s (Hexachlorobenzene & Zinc), 9, NA3077, PGIII	112	BF	0660	G	0032	W
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Approval #52595NC
Also: 0030

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
If spilled dike area, contain in drums call CHEMTREC 800-424-9300. Refer to ERG #31

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. Chaperon — Signature: John E Chaperon — Date: Month Day Year: 05 31 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year: 1 1 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Date: Month Day Year:

SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) PR 5110 Rev. 10/

GENERATOR 1st COPY

APPENDIX G

MISCELLANEOUS SOIL PILE DISPOSAL MANIFESTS

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

P.A. 64, as amended, and Act 136, P.A. 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MI1D0191Z1412919 — Manifest Document No. 201153

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St.
Fowlerville, Mi. 488
Mail to: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450720

B. State Generator's ID:

5. Transporter 1 Company Name: Young's Environmental

6. US EPA ID Number: MID010618695016

C. State Transporter's ID:

D. Transporter's Phone: 810-789-715

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
Wayne Disposal Inc.
49350 N. I-94 Service Drive
Belleville, Mi. 48111

10. US EPA ID Number: MID048090633

G. State Facility's ID:

H. Facility's Phone:

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	NI
a. Soil + Debris, NHCS, Non RCRA Contaminated, Non-Hazardous	001	DT				
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval # 042145 WA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year 10 4 24 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Jerry Ritter — Signature: Jerry Ritter — Date: Month Day Year 10 4 24 90

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name: — Signature: — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19:

Printed/Typed Name: — Signature: — Date: Month Day Year

IF SPILL MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM: 1-800-424-8802 24 HOURS PER DAY. IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

EPA Form 8700-22 (Rev. 9/88) To be mailed by Generator to: Michigan DNR Box 30038

PR 511 Rev. 10

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M|1|0|0|9|1|2|4|2|9|9 — Manifest Document No. 2|0|1|5|5

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 W. Frank St.
Fowlerville, Mi 48836

Mail to: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number MI 3450724

B. State Generator's ID

5. Transporter 1 Company Name: Young's Environmental

6. US EPA ID Number: M|I|D|1|0|6|8|6|9|5|0|6

C. State Transporter's ID

D. Transporter's Phone 810-789-715

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal Inc
49350 N. I-94 Service Drive
Belleville, Mi 48111

10. US EPA ID Number: M|I|D|0|4|8|0|9|0|6|3|3

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. Soil & Debris, NHLS, Non-RCRA Contaminated, Non-Hazardous	0|0|1	D|T	0|0|3|0	C|Y		
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval # 042195 WA

K. Handling Codes for Wastes Listed Above

a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date (Month Day Year)
John E. Chaperon	John E. Chaperon	04 24 93

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Jerry Ritter	Jerry Ritter	04 24 93

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)

GENERATOR — TRANSPORTER — FACILITY

ALL CENT... MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN A ...IN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) To be mailed by Michigan DNR PR 5110

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 Act 136, P.A. 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M1D099124299 Manifest Document No. 201156

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Stanley Tools
425 Frank St
Fowlerville, Mi 48836
Mail to: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain Ct 06053

4. Generator's Phone (203) 827-3802

A. State Manifest Document Number MI 3450742

B. State Generator's ID

5. Transporter 1 Company Name: Young's Environmental

6. US EPA ID Number: M1D106869506

C. State Transporter's ID

D. Transporter's Phone 810-789-7

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Wayne Disposal
49350 No I-94 Service Drive
Belleville, Mi 48111

10. US EPA ID Number: M1D048090633

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol	I. Waste No.
a.	Soil + Debris, NHCS, Non-RCRA Contaminated, Non-Hazardous	001	DT		CY	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
Approval #: 042195 WA

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determin to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my wa generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON
Signature: John E. Chaperon
Date: Month Day Y 04 25 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JERRY RITTER
Signature: Jerry Ritter
Date: Month Day Y 04 25 9

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Y

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Y

GENERATOR

TRANSPORTER

FACILITY

ALL CENTER ...UST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN M... AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE ...800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88) To be mailed by Michigan DNR

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Please print or type.

Form Approv

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MI D 0 9 9 1 2 4 2 9 9 | Manifest Document No. 2 0 1 5 7 | 2. Page 1 of 1

3. Generator's Name and Mailing Address
Stanley Tools
425 Fourth St
Fowlerville, Mi 48836

Mail to: William Guerrera
The Stanley Works
1000 Stanley Drive
New Britain, Ct 06053

4. Generator's Phone (203) 827-3802

A. State Mani: MI

B. State Gen:

5. Transporter 1 Company Name: Youngs Environmental

6. US EPA ID Number: MI D 1 0 6 1 8 6 1 9 5 0 6

C. State Tran:

D. Transporter:

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Tran:

F. Transporter:

9. Designated Facility Name and Site Address
Wayne Disposal
49350 N. I-94 Service Dr.
Belleville, Mi 48111

10. US EPA ID Number: MI D 0 4 8 9 9 0 6 3 3

G. State Facil:

H. Facility's

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM		12. Containers No.	Type	13. Total Quanti
a.	Soil + Debris, NHCS, Non-RCRA Contaminated, Non-Hazardous	001	PT	0003
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above
Approval # 04215 WA

K. Handling Cod Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently ava present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good fa generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON | Signature: John E. Chaperon

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JERRY R. TEN | Signature: Jerry Rotten

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name | Signature

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature

GENERATOR

V AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE

UST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN ... 800-424-8802 24 HOURS PER DAY.

AL CENTER

EPA Form 8700-22 (Rev. 9/88) To be mailed by Michigan DNR

APPENDIX H

EXISTING EXCAVATION WATER DISPOSAL MANIFEST

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 54, PA 1979, as amended and Act 136, PA 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969.

Please print or type:

Form Approved. OMB No. 2050-0039 Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MID099124299 — Manifest Document No.: 20150
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Stanley Tools, 425 Frank Street, Fowlerville, Mi 48836 — Mail to: William Guerrera, The Stanley Works, 1000 Stanley Drive, New Britain, Ct 06053
4. Generator's Phone (203) 827-3802

A. State Manifest Document Number: MI 3450727
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone: 810-787-775
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone:

5. Transporter 1 Company Name: Young's Environmental Cleanup Inc — 6. US EPA ID Number: MID106869506
7. Transporter 2 Company Name: — 8. US EPA ID Number:
9. Designated Facility Name and Site Address: Dynecol, Inc, 6520 Georgia Street, Detroit, Mi 48211 — 10. US EPA ID Number: MID074259565

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a.	X	RQ Waste Environmentally Hazardous Substances, Liquid, NOS, Hazardous Class 9 UN 3082, Packaging Group III (Nickel, Copper)	001	TT	05042	gal	F006	H
b.								
c.								
d.								

J. Additional Descriptions for Materials Listed Above: Approval # 3536 E

K. Handling Codes for Wastes Listed Above: a/ / b/ / c/ / d/ /

15. Special Handling, Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John E. CHAPERON — Signature: John E. Chaperon — Date: Month Day Year: 04 20 95

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Rich Kiettell — Signature: [signature] — Date: Month Day Year: 04 20 95

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Date: Month Day Year:

GENERATOR / TRANSPORTER / FACILITY

MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, I... AN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE ... 800-424-8802 24 HOURS PER DAY.

Form 3000-02 Rev. 9/88 — To be mailed by Michigan DNR

APPENDIX J

APPENDIX J

ISM REPORT

URS

DRAFT
SUMMARY REPORT
INTERIM REMEDIAL (STABILIZATION) MEASURES IMPLEMENTATION

FORMER STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

Prepared for:

JOHNSON CONTROLS, INC.

JOB NO.: 20209-019-121
OCTOBER 4, 2001

36 East 7th Street, Suite 2300
Cincinnati, Ohio 45202
Voice (513) 651-3440
Fax (513) 651-3452

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2 INTERIM REMEDIAL (STABILIZATION) MEASURES - SOUTH EXCAVATION

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A TEST PIT LOGS

B LABORATORY REPORTS - OIL SEEPS AND TEST PIT SAMPLES

C LABORATORY REPORTS – WASTE DISPOSAL

D WASTE DISPOSAL MANIFESTS

INTRODUCTION

This report summarizes Interim Remedial (Stabilization) Measures (IRM) conducted by Johnson Controls, Inc. [JCI] at the former Stanley Tools Facility in Fowlerville, Michigan. The work was performed in accordance with the Work Plan dated October 19, 2000 that was prepared in response to a request by the United States Environmental Protection Agency (U.S. EPA). The purpose of the IRM was to mitigate oil seepage entering Red Cedar River adjacent to the facility either through the piping or seepage through riverbank soil. Interim measures were conducted between August 15 and 22, 2001 by ENTACT of Wood Dale, Illinois, under the full time observation of a URS representative.

SCOPE OF WORK

The primary objective of the IRM Work Plan was to mitigate the identified oil seepage, and stabilize the situation until (at least) completion of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). An additional objective of the IRM was to gather additional information regarding the nature and extent of the constituents associated with the seepage, in order to allow for appropriate consideration during the remaining RFI. The following measures were implemented to achieve these objectives:

- JCI retained an experienced remediation contractor to access the seepage areas, and install controls to minimize the potential for release of oil or stream-bank soil during the IRM.
- The contractor excavated and removed the historic discharge piping and visibly oil-impacted soil within 20 feet (horizontal) of the normal high water edge at the north location and 15 feet at the south location. The contractor then backfilled the excavation, installed a high-density polyethylene (HDPE) liner to act as a barrier to future migration.
- Excavation of seven test pits landward of the seepage areas to better define the lateral extent of the subsurface oil.

IRM IMPLEMENTATION

The contractor (ENTACT) arrived on site on August 14, 2001 and began site preparation, which was completed on August 15. The areas of pipe removal were cleaned of vegetation, silt fences were installed 5 feet in land from the river edge, a personnel decontamination area was set up, 10 roll-off boxes were staged and a 4,600 gallon polypropylene water storage tank was staged inside a temporarily bermed and lined area. (A 21,000 gallon frac tank was delivered to the site on August 18.) A temporary construction fence was installed across both areas where a portion of the security fence had been removed. The ends of the pipes to the north were plugged with Quikrete® on August 15.

NORTH AREA

Excavation and removal of the northern set of pipes began on August 16. A trackhoe was used to excavate the material, which was then placed directly into a rubber-tired end-loader bucket, which transported the material to a roll-off box. The trackhoe and end-loader always operated outside the excavated area with only it's buckets in contact with potentially contaminated material. The excavation was approximately 22 feet wide extending about 27 feet inland. The three exposed pipes were cut, removed, and plugged with Quikrete®. The removed portions were placed in a roll-off box. The inside of all three pipes appeared clean with no visible signs of contamination in the surrounding soil; however, there was some discoloration in the bottom of the excavation along the southern portion. Upon further excavation, pieces of broken clay tile were uncovered. A sketch of the final excavation is shown on Figure 1.

Soil from an area approximately 10 feet wide along the length of the existing excavation was removed to a depth of another 12 to 18 inches. The pipe was estimated to be 12 to 15 inches in diameter but could not be confirmed because of its condition. The pipe ran somewhat parallel to the 8-inch diameter polyvinyl chloride (PVC) pipe and in the direction of the existing former treatment building. This pipe, or what is believed to be the same pipe was encountered in the north end of test pit, E-TP-1 on the west side of the

building and contained water and sediment/sludge that was observed entering the test pit excavation.

Soil samples were obtained from the bottom and from the north sidewall (crushed pipe section) of the final excavation, the analytical results of which are discussed in the following section.

A layer of gravel was placed over the bottom of the excavation. A soil berm (barrier) was then constructed across the excavated area and a 60 mil HDPE liner was placed across the eastern face of the berm. The entire excavation was then backfilled with imported sandy soil.

Following backfilling, the section of soil that was left in place adjacent to the river edge (to prevent flooding of the initial excavation) was then removed and replaced with clean backfill. Topsoil was later placed and the area was seeded and strawed. A silt fence was re-installed installed adjacent to the river edge.

SOUTH AREA

Excavation of the southernmost pipe area began on August 17 and was completed on August 20 using the same equipment used at the north pipe area. The procedures implemented varied somewhat from those set forth in the Work Plan based on site conditions. Because the pipe diameter was actually 18 inches instead of the anticipated 12 inches, the contractor was unable to plug the end, as he was unable to acquire that large of a plug on short notice.

An initial excavation over the pipe was started about 5 feet inland of the river to keep water from entering the excavation per plan. The top of the pipe was exposed at a depth of 9 feet. The dike at the river edge was then removed allowing water to flow into the excavation. The first section of pipe at the river edge was then removed allowing water to flow into the excavated pipe trench. A berm was then reconstructed at the river edge across the excavation using imported clay. Water was then pumped from the excavation to the frac tank and excavating then continued uncovering the pipe for a distance of about 15 feet inland, where a bell joint was exposed. The pipe was then removed to this point.

The pipe contained water and sludge that flowed into the excavation. A sample of the sludge was obtained for chemical analyses. Water entering the excavation from the pipe was pumped to the frac tank. Remaining material in the excavation was removed and placed in roll-off boxes. A soil sample was obtained from the excavation on the south side of the pipe and from the bottom of the excavation.

An 18-inch diameter plywood plug was placed into the end of the exposed pipe and a sheet of 1-inch plywood placed in front of the pipe across the width of the pipe trench. A second sheet was inserted 6 inches in front of the first piece. The 6-inch area between the sheets was then filled with Quikrete® to a level above the pipe.

A layer of gravel was placed in the bottom of the excavation. A berm (barrier) was then constructed across the width of the excavation with imported sandy soil and a layer of 60-mil HDPE liner was installed over the eastern face of the berm. The remaining excavation was backfilled with sandy soil and remaining imported clayey soil. Topsoil was placed and the area seeded and strawed.

A sketch of the excavation is shown on Figure 2.

TEST PITS

A total of seven test pits were excavated in the areas of Solid Waste Management Units (SWMUs) B, C, and E to investigate the potential impact and extent of leakage from the piping units and establish the source of free product present in groundwater monitoring wells MW-C2 and MW-C3. The depth of the test pits varied between 6 feet and 9.5 feet below the ground surface. Although soil discoloration and a chemical odor was noted in all test pits, no free product was encountered at any of the locations, however, where water was encountered, an oil sheet was generally observed. Soil samples were obtained from test pits B-TP-3 and E-TP-2, the results of which are discussed in the section that follows.

A clay tile pipe was encountered at two test pit locations, one at E-TP-2 as previously discussed and the other at B-TP-3. At the later location, the pipe encountered is believed to be the 18-ich diameter clay tile pipe that was removed adjacent to the Red Cedar River.

The bell of a joint was exposed at a depth of 5 feet and the pipe appeared to be encased in concrete at this location.

All test pit excavations were backfilled with the excavated material and a wooden stake with the test pit number was installed at each location. A log of each test pit is included in Appendix A. Test pit locations are shown on Figure 3.

LABORATORY ANALYSES

As mentioned above, eight samples were collected and sent to Severn Trent Laboratories of Denver, Colorado for testing of RCRA metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs). Four soil samples and one sediment sample from the south pipe were collected from the pipe excavations and three soil samples were from test pits. The results of these analyses are presented on Tables 1 and 2 and discussed below.

Samples in the north excavation were collected from the north sidewall of the excavation at 4 feet of depth (roughly the same level as the crushed pipe) and in the base of the excavation under where the crush pipe was removed. The data from these samples suggest no evidence of impact from metals, VOCs, SVOCs, or PCBs with the exception of a trace detection of chlorobenzene.

Soil samples in the south excavation were collected from a sidewall adjacent to the pipe and from under the pipe. An additional sample was collected from the sediment/muck found within the excavated pipe. The data suggest that the sediment is elevated relative to the surrounding soil with respect to several parameters: arsenic, chromium, mercury, phenanthrene (a polynuclear aromatic hydrocarbon [PAH]), and the PCB Aroclor 1248. No VOC detections were identified in the sediment sample, but detection limits were elevated by three or more orders of magnitude, likely because of the organic muck character of the material. In addition to the sediment sample, the soil samples from the south excavation contained traces of a variety of VOCs including acetone, 2-butanone, 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethene (1,2-DCE), and vinyl chloride.

Test pit samples were collected from the sidewalls of pits excavated in the vicinity of SWMUs E and B. The samples were collected to characterize materials that were notably stained or had a distinctive odor. The data suggest that the selected materials were generally elevated in chromium, some SVOCs, and PCBs, although the degree of impact varied considerably. Chromium, and to a lesser extent mercury, appears elevated in each of the samples relative to the excavation soil samples, but the concentrations have a significant spread from 151 to 2,470 mg/kg, with the highest concentration in sample B-TP-3 (5 feet) collected from a green sludge-like material. The VOC 1,2-dichlorobenzene was detected in both samples from SWMU B, though the detection limits are several orders of magnitude different. Two PAHs were detected in B-TP-3 (5 feet). PCBs were detected in all three samples, with concentrations over 1 mg/kg detected in E-TP-2 and B-TP-3 (5 feet).

One additional piece of data regarding contaminant distribution was obtained in the field by observation of the presence or absence of free-phase petroleum product or other non-aqueous phase liquid (NAPL). This observation is important because the suspected NAPL was highly weathered kerosene, which elsewhere has not had a significant VOC or SVOC signature. Each of the excavations, except for the northern pipe excavation, encountered water but no free-phase liquid was found. This include two test pits dug to 7.5 and 9.5 feet on either side of monitoring wells MW-C1 and C-3 in which free-phase kerosene has been measured.

These data combined suggest that impact to soil is relatively less in the pipe excavations near the river. The sediment in the southern pipe appears to be preferentially impacted, but, although it may have been in the past, it does not currently appear to be a significant residual source of impact. Instead, the sediment appears similar in character to discolored soils sampled in the test pits. The discolored soils were encountered in most of the test pits dug to investigate SWMUs B, C, and E, suggesting that similar levels of impact may be widely distributed in the area at depths ranging through the test pit depths as great as 9 feet. The lack of kerosene in pits in SWMU C suggests that the kerosene may be entrained in a deeper groundwater zone that is screened by the wells having measured thicknesses of free-phase liquid.

DISPOSAL OF MATERIAL

Material excavated from the north and south pipe removal areas was placed in roll-off boxes. Representative samples were obtained from each roll-off box by the contractor to ascertain disposal requirements. Samples were analyzed by Pace Analytical (Pace) of Indianapolis, Indiana, the results of which are summarized in Table 3. Laboratory reports are included in Appendix C. Based on the results of these analyses all material was disposed of as non-hazardous at Woodland Meadows RDF located in Van Buren, Michigan. Copies of the disposal manifests are included in Appendix D.

A sample of water was also obtained from the frac tank by the contractor and sent to Pace for analyses. Based on the results of these analyses, the water was transported to _____ for disposal. The laboratory report is included in Appendix C; disposal manifests are included in Appendix D.

SITE RESTORATION

The site was restored following completion of IRM. Impacted areas were smoothed over, the sections of the security fence that were removed were replaced, and the liner and berm constructed around the 4,600-gallon polypropylene tank were removed. The liner, old fence parts, and miscellaneous debris were placed in a roll-off box and disposed of with the other roll-off boxes.

CONCLUSIONS

Based on the observations of the URS on-site representative during IRM, it is our opinion that the measures conducted at the north and south pipe areas to mitigate potential seepage of oil from entering the Red Cedar River through potential pipeline passways was completed in accordance with the intent of the Work Plan with some necessary modifications based on site conditions encountered.

The test pits excavated in the areas of SWMU-B, C, and E did not reveal any free product or the potential source of the free product present in monitoring wells MW-C2 and MW-C3. However, soil discoloration and chemical odor was noted at all locations.

TABLE 1

DETECTION SUMMARY
INTERIM REMEDIAL (STABILIZATION) MEASURES - PIPE EXCAVATIONS

JOHNSON CONTROLS, INC.
FORMER STANLEY TOOLS FACILITY - FOWLERVILLE, MICHIGAN

	North Excavation		South Excavation			
Metals (mg/kg)	E1-N (N 4 feet)	E1-N (Base)	E2-S (Next to Pipe)	E2-S (Base)	S-18 in Pipe (Sediment)	TB 8/17/01
Arsenic	7.5	2.8	7.3	4.6	69.9	NA
Barium	10.1	55.1	91.8	39.0	32.7	NA
Cadmium	<0.60	<0.59	<0.63	<0.58	<0.68	NA
Chromium	3.4	10.9	11.6	12.3	103	NA
Lead	1.1	3.2	9.6	4.8	11.6	NA
Mercury	<0.039	0.0083 B	0.058	0.0062 B	0.075	NA
Volatile Organic Compounds (µg/kg)						
Acetone	<24	<24	180	<19	<1,400	2.8 J
2-Butanone (MEK)	<24	<24	48	<19	<1,400	<5.0
Chlorobenzene	7.1	6.5	<10	<4.6	<340	<1.0
Chloroethane	<12	<12	<20	1.3 J	<680	<2.0
1,2-Dichlorobenzene	<6.0	2.2 J	<10	<4.6	<340	<1.0
1,1-Dichloroethane	<6.0	<5.9	24	43	<340	<1.0
1,2-Dichloroethene (total)	<6.0	<5.9	5.8 J	31	<340	<1.0
cis-1,2-Dichloroethene	<3.0	<5.9	2.5 J	19	<170	<1.0
trans-1,2-Dichloroethene	<3.0	<5.9	3.3 J	12	<170	<0.50
Vinyl chloride	<12	<12	6.3 J	41	<680	<1.0
Semivolatile Organic Compounds (µg/kg)						
Benzo (a) pyrene	<390	<390	150 J	<380	<1,800	NA
Fluorene	<390	<390	<420	<380	1,600 J	NA
Phenanthrene	<390	<390	<420	<380	2,700	NA
Pyrene	<390	<390	<420	<380	680 J	NA
Polychlorinated Biphenyls (µg/kg)						
Aroclor 1016	<39	95	<42	<38	<900	NA
Aroclor 1242	<39	100	<42	<38	<900	NA
Aroclor 1248	<39	<39	28 J	<38	2,500	NA
Aroclor 1254	<39	<39	<42	100	<900	NA
Aroclor 1260	<39	<39	<42	99	<900	NA
Percent Moisture (%)	16.3	15.6	20.8	13.8	27.0	NA

Samples collected by URS August 2001
Samples analyzed by STL in Denver, Colorado September 2001
B = Estimated result - result is less than reporting limit
J = Estimated result - result is less than reporting lmit
NA = Not analyzed

TABLE 2

DETECTION SUMMARY
INTERIM DELINEATION MEASURES - TEST PITS

JOHNSON CONTROLS, INC.
FORMER STANLEY TOOLS FACILITY - FOWLERVILLE, MICHIGAN

	SWMU E	SWMU B	
Metals (mg/kg)	**E-TP-2 (4 feet)**	**B-TP-3 (4 feet)**	**B-TP-3 (5 feet)**
Arsenic	5.9	1.2	<18.7
Barium	44.1	20.2	23.1
Cadmium	0.067 B	0.054 B	<9.4
Chromium	151	969	2,470
Lead	11.8	8.1	11.2 B
Mercury	0.050	0.021 B	0.087
Volatile Organic Compounds (µg/kg)			
1,2-Dichlorobenzene	<2,800	34	4,200 J
Isopropylbenzene	<2,800	2.3 J	<7,500
Methylene chloride	<2,800	1.2 J	<7,500
Semivolatile Organic Compounds (µg/kg)			
Fluorene	150 J	<370	2,300
Phenanthrene	<360	<370	1,300
Pyrene	<360	<370	<1,200
Polychlorinated Biphenyls (µg/kg)			
Aroclor 1248	2,700	260	4,300
Aroclor 1260	<360	38	<1,200
Percent Moisture (%)	9.2	11.7	46.6

Samples collected by URS August 2001
Samples analyzed by STL in Denver, Colorado September 2001
B = Estimated result - result is less than reporting limit
J = Estimated result - result is less than reporting lmit
NA = Not analyzed

TABLE 3

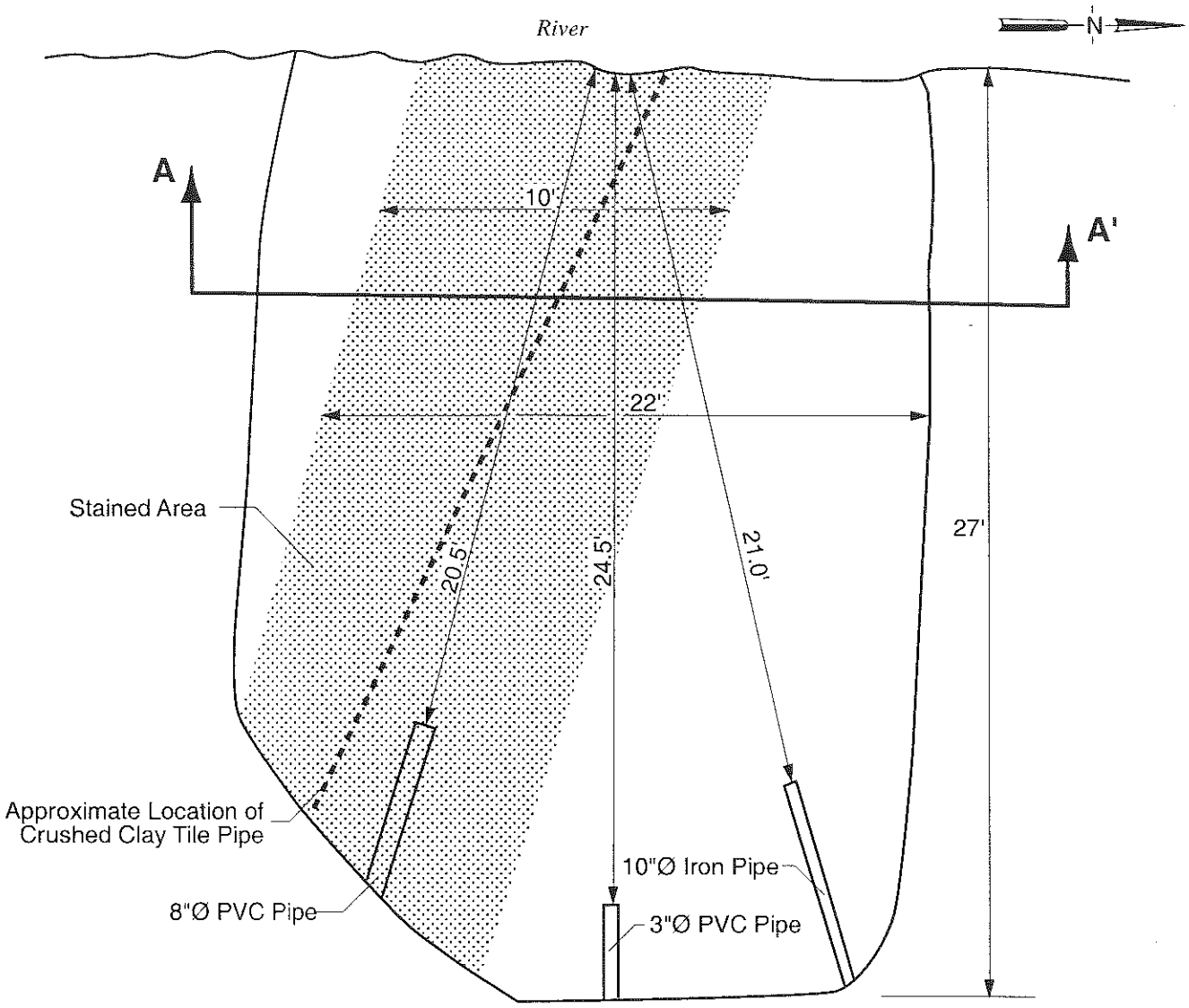
RESULTS OF LABORATORY ANALYSES - WASTE DISPOSAL
SUPPLEMENTAL SAMPLING DATA RESULTS

JOHNSON CONTROLS, INC.
FORMER STANLEY TOOLS FACILITY - FOWLERVILLE, MICHIGAN

Parameter	Reporting Limit	Sample ID (Excavated Soil) WCS-001WP	WCS-002	WCS-003	WCS-004	WCS-005	WCS-005FD	WCS-006	WCS-007	WCS-008	WCS-009
Barium, TCLP (mg/L)	0.100	0.629	0.962	0.63	0.586	0.565	0.580	0.589	0.559	0.624	0.550
Chromium, TCLP (mg/L)	0.0500	-	-	-	0.0604	-	-	-	-	-	
Selenium, TCLP (mg/L)	0.0100	-	-	-	-	-	-	-	-	-	0.0110
Phenathrene, TCLP (µg/kg)	330	-	-	370	-	-	-	-	-	-	-
Fluoranthene, TCLP (µg/kg)	330	-	-	550	-	-	-	-	-	-	-
Pyrene, TCLP (µg/kg)	330	-	-	440	-	-	-	-	-	-	-
PCB-1248 (µg/kg)	160	210	650	410	160	330	380	70	340	1,400	920

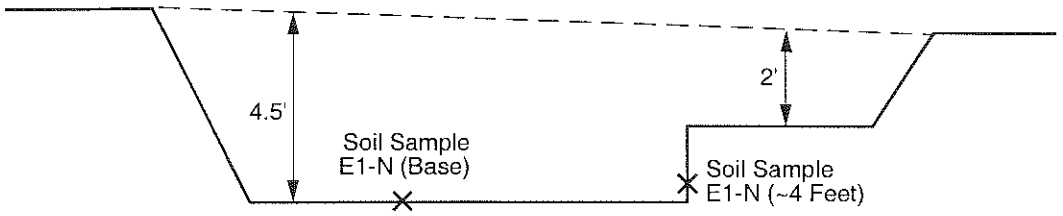
	WCW-001 (water)
Arsenic (mg/L)	0.0586
Barium (mg/L)	0.426
Cadmium (mg/L)	0.00966
Chromium (mg/L)	1.94
Lead (mg/L)	0.458
bis (2-Ethylhexyl) phthalate (µg/L)	240
PCB-1248 (µg/L)	20
Vinyl chloride (µg/L)	45
trans-1,2-Dichloroethene (µg/L)	20
1,1-Dichloroethane (µg/L)	6.0
cic-1,2-Dichloroethene (µg/L)	150
Trichloroethene (µg/L)	61

"-" = None detected above reporting limit



PLAN VIEW

Approximate Scale: 1" = 5'



SECTION A - A'

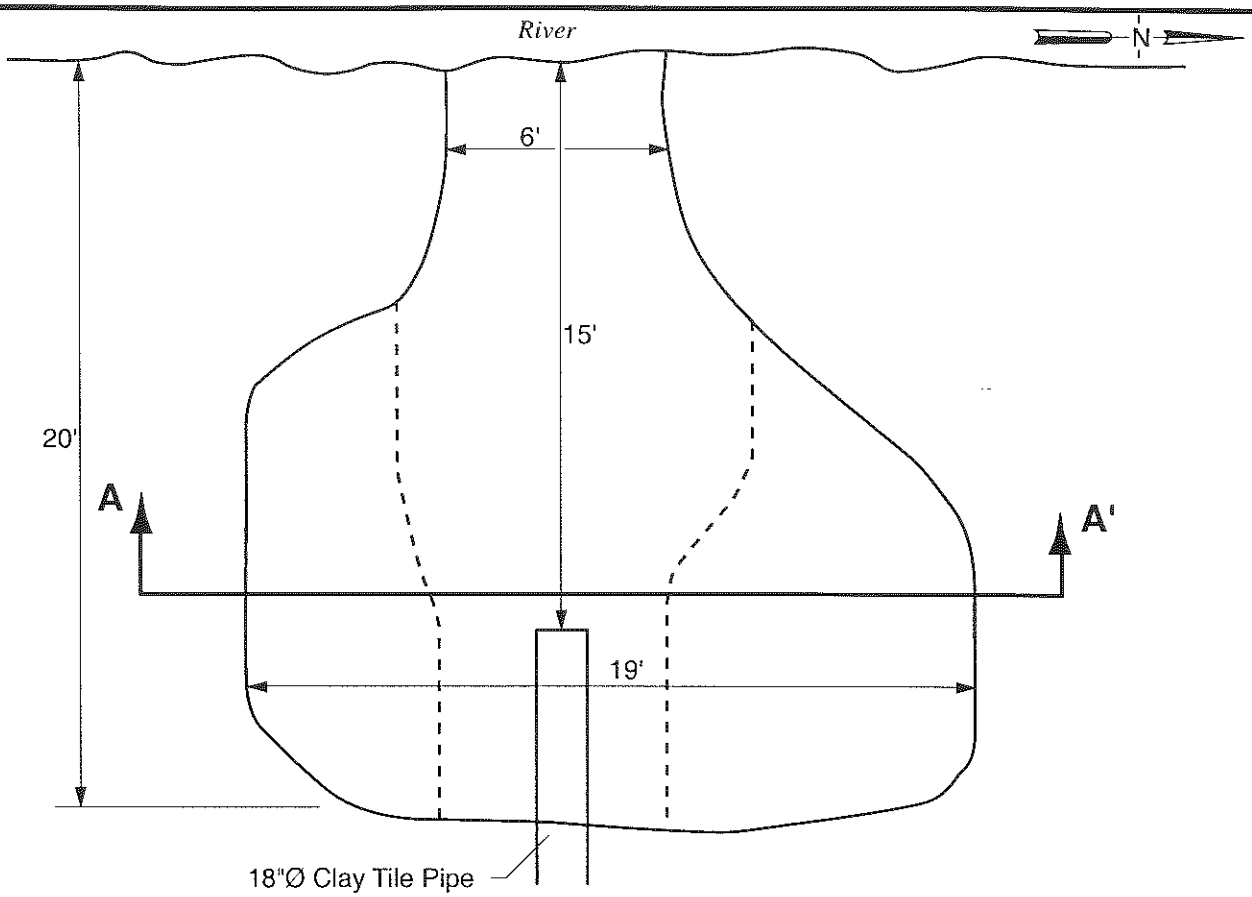
Approximate Scale: 1" = 5'

Johnson Controls, Inc.
Former Stanley Tools Facility
Fowlerville, Michigan

FIGURE 1
INTERIM REMEDIAL
(STABILIZATION) MEASURES
NORTH EXCAVATION

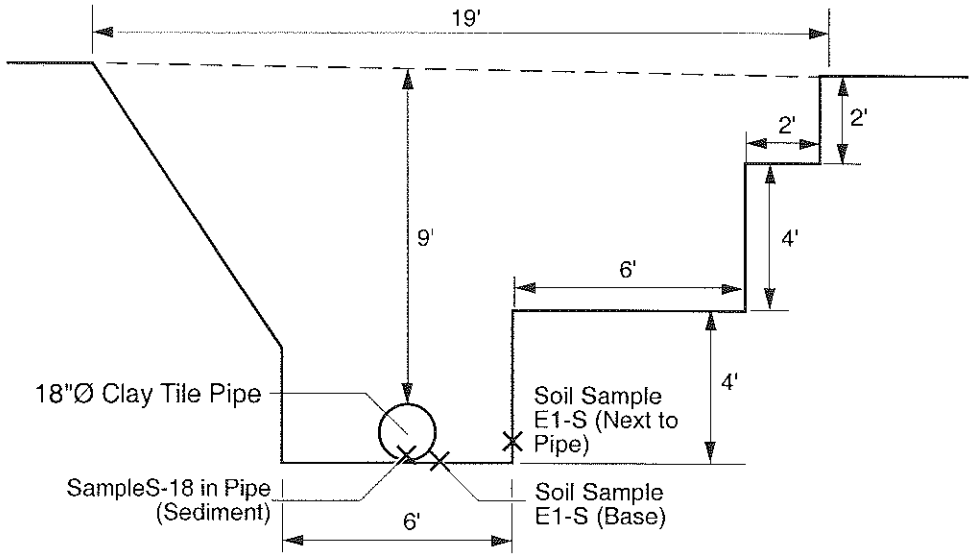
JOB NO. 20209-019-121 URS

JOHNSON CONTROLS – 20209-019-032-121 – ISM AUGUST 2001



PLAN VIEW

Approximate Scale: 1" = 5'



SECTION A - A'

Approximate Scale: 1" = 5'

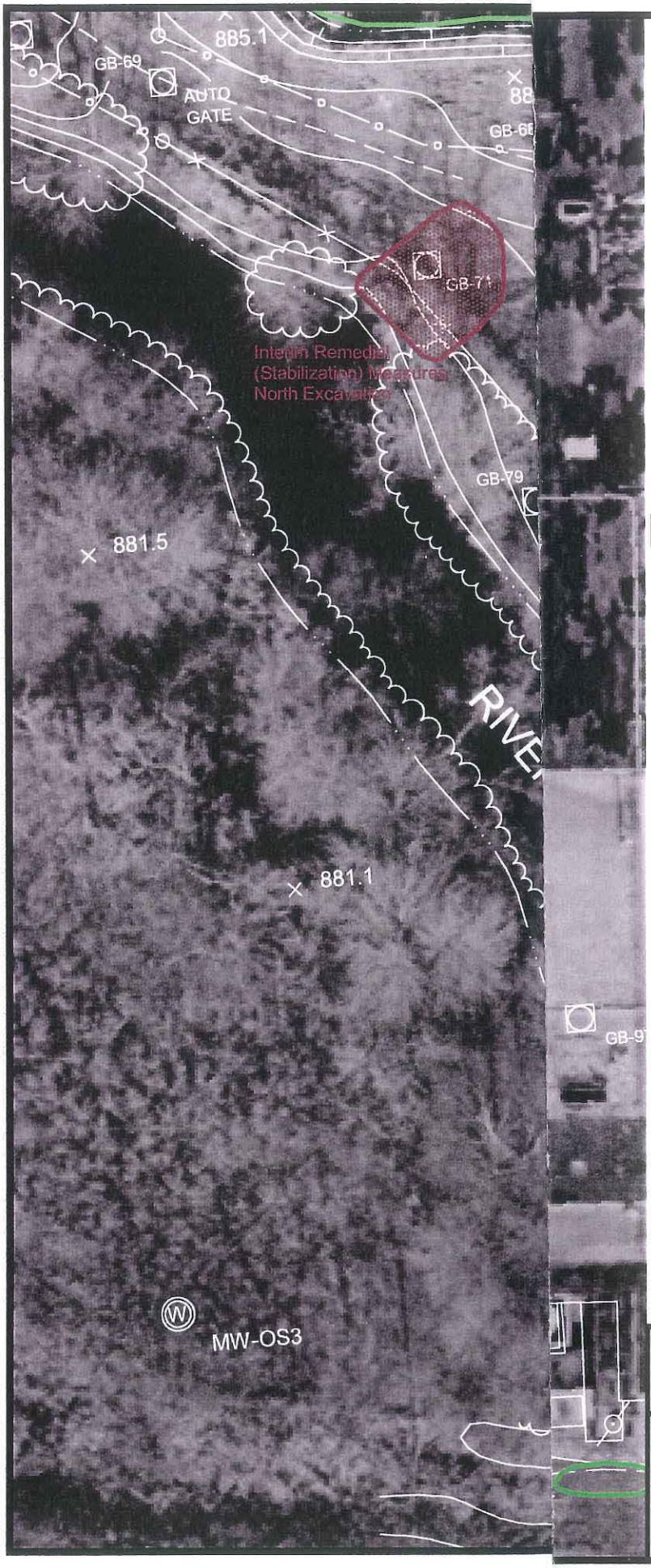
Johnson Controls, Inc.
Former Stanley Tools Facility
Fowlerville, Michigan

FIGURE 2
INTERIM REMEDIAL
(STABILIZATION) MEASURES
SOUTH EXCAVATION

JOB NO. 20209-019-121

URS

JOHNSON CONTROLS – 20209-019-5052-121 – ISM AUGUST 2001



N

LEGEND:

SOLID WASTE MANAGEMENT UNIT BOUNDARY

INTERIM REMEDIAL (STABLIZATION) MEASURES AREA

INTERIM REMEDIAL (STABILIZATION) MEASURES TEST PIT

0 30 60

SCALE IN FEET

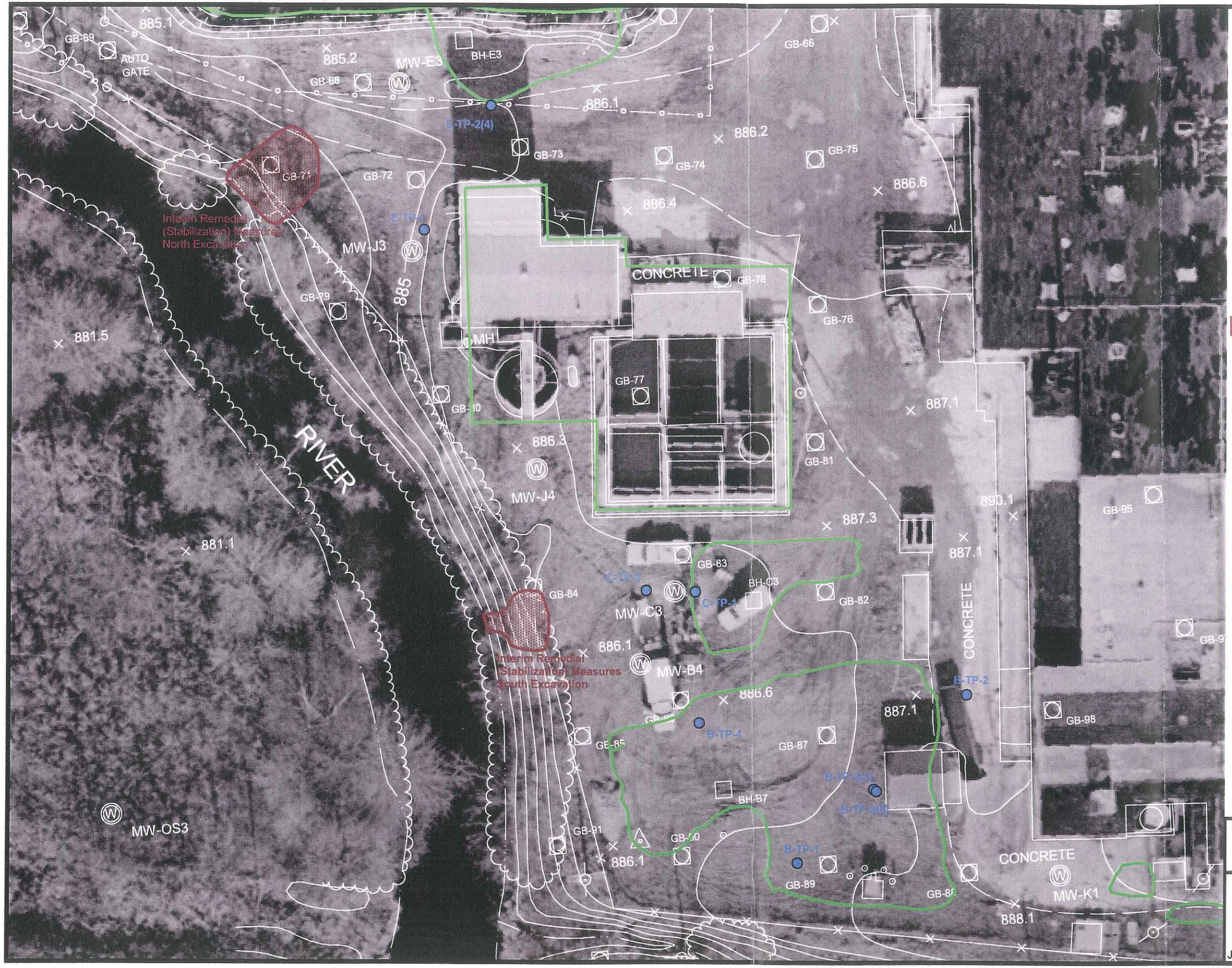
Johnson Controls, Inc.

FORMER STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

FIGURE 3
INTERIM REMEDIAL
(STABILIZATION) MEASURES
TEST PIT LOCATIONS

JOB NO. 20209-020-121

URS



Johnson Controls, Inc.
FORMER STANLEY TOOLS FACILITY
FOWLERVILLE, MICHIGAN

FIGURE 3
INTERIM REMEDIAL
(STABILIZATION) MEASURES
TEST PIT LOCATIONS

JOB NO. 20209-020-121

URS

APPENDIX A

TEST PIT LOGS

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Brown silty fine SAND
			(pocket of light green soft silty clay like material)
			Dark gray and brown silty fine SAND with clay and gravel with black streaks
			Brown fine SAND with silt and black streaks
5			Gray with pockets of black fine SAND with silt
			Gray fine to medium SAND with silt
10			Test pit completed at 9.5' on 8-21-01 Water level at 9.0 feet on 8-21-01 Test pit backfilled on 8-21-01 No free product observed
15			

Johnson Controls, INC. - 20209-019-121 - Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
B-TP-1

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Dark brown and black silty fine to medium SAND with gravel, petroleum odor (FILL)
5			Gray fine SAND, wet, with oil sheen (top of clay pipe at 5.0 ft)
			Test pit completed at 6.0' on 8-21-01 Water level at 5.5 feet on 8-21-01 Test pit backfilled on 8-21-01 No free product observed
10			
15			

Johnson Controls, INC. - 20209-019-121 - Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
B-TP-2

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Brown fine SAND with silt
			grades with gray streaks
			(sample collected at 4') grades with dark gray pockets (slight petroleum odor)
5			(sample collected at 5') grades with pockets of light greenish-gray silty clay like material, soft

Test pit completed at 6.0' on 8-21-01
Test pit backfilled when caving occured
No water encountered
No free product observed

10

15

Sample collected for laboratory analysis

Johnson Controls, INC. - 20209-019-121 - Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
B-TP-3

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Brown with seams of dark gray and black fine SAND pockets of light green to greenish-gray clay like material, soft
5			Gray and brown silty SAND
			Gray silty CLAY
			Gray fine SAND, wet, with oil sheen and slight petroleum odor
10			Test pit completed at 9.5' on 8-21-01 Test pit backfilled on 8-21-01 Water encountered at 9.0' on 8-21-01 No free product observed
15			

Johnson Controls, INC. - 20209-019-121 - Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
B-TP-4

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Brown fine SAND with silt
			Gray with black streaks silty fine SAND, slight petroleum odor
5			Black fine to medium SAND with silt
			Black fine to coarse SAND, wet

Test pit completed at 7.5' on 8-21-2001 due to caving
Water level at 7.0' on 8-21-2001
Test pit backfilled on 8-21-2001
No free product observed

10

15

Johnson Controls, INC. - 20209-019-121 - Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
C-TP-1

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Brown silty fine SAND
			Black dark gray and brown silty fine SAND with clay, petroleum odor
5			Gray silty CLAY with black streaks, petroleum odor
			Gray fine SAND, wet, slight petroleum odor
10			Test pit completed at 9.5' on 8-21-01 Water level at 9.0' on 8-21-2001 Test pit backfilled on 8-21-2001 No free product observed
15			

Johnson Controls, INC. • 20209-019-121 • Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
C-TP-2

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Brown silty fine to medium SAND with clay (FILL)
			grades black
			Brown silty fine to medium SAND with some coarse sand
5			12-15 diameter inch clay tile, petroleum odor, (grayish staining around pipe)
			Test pit completed at 6' on 8-21-2001 Water level at 4.5' on 8-21-2001 Test pit backfilled on 8-21-2001 No free product observed
10			
15			

Johnson Controls, INC. - 20209-019-121 - Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
E-TP-1

Depth (Feet)	Sample Location	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS
0			Brown silty fine to medium SAND with clay and misc. debris (FILL)
			Brown and gray with black streaks fine sandy SILT, petroleum odor
			(sample collected at 4')
5			Gray silty fine SAND with soft clay, slight petroleum odor
			Brown and gray silty fine to medium SAND
10			Test pit completed at 9.5' on 8-21-2001 Water level at 9.0' on 8-21-2001 Test pit backfilled on 8-21-2001 No free product observed
15			

Sample collected for laboratory analysis

Johnson Controls, INC. - 20209-019-121 - Fowlerville, MI

URS

JOB NO. 20209-019-121

Johnson Controls, INC.

Former Stanley Tools
Fowlerville, MI

TEST PIT
E-TP-2

APPENDIX B

(NOT INCLUDED WITHIN THIS RFI REPORT)

LABORATORY REPORTS
OIL SEEPS AND TEST PIT SAMPLES

APPENDIX C

(NOT INCLUDED WITHIN THIS RFI REPORT)

LABORATORY REPORTS
WASTE DISPOSAL

APPENDIX D

WASTE DISPOSAL MANIFESTS

NON-HAZARDOUS WASTE MANIFEST

NO. 27182

GENERATOR: JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI.

Transporter: INDUSTRIAL MATERIALS CLEARANCE

Vehicle No.: 63

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges: ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID, BROWN	Gross Wt. 25 YRds.
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph S Cantu / ENTACT Date: 9-21-01

Transporter Signature: [signature] Date: 9-21-01

Destination Signature: [signature] 306735 Date:

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 27183

GENERATOR:
JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI

Transporter: INDUSTRIAL MATERIALS CLEARANCE

Vehicle No.: 73

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [X] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID, BROWN	25 YRDS Gross Wt.
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph Martin/ENTACT Date: 9-21-01

Transporter Signature: Jeff Horton Date: 9-21-01

Destination Signature: 306710 Date:

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 27184

GENERATOR:
JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI.

Transporter: INDUSTRIAL MATERIAL CLEARANCE

Vehicle No.: 73
BOX # 025246

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID, BROWN	25 YDS. Gross Wt.:
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph J Carlson / ENTACT Date: 9-22-01

Transporter Signature: Date: 9-22-01

Destination Signature: Date:

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 27185

GENERATOR:
JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI

Transporter: INDUSTRIAL MATERIAL CLEARANCE

Vehicle No.: 63

ROLL OFF BOX # 026506

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID, BROWN	Gross Wt.: 25 Yrds.
			Tare Wt.:
			Net Wt.:

Generator Signature: [signature] / ENTACT Date: 9-21-01

Transporter Signature: [signature] Date: 9-21-01

Destination Signature: _____ Date: _____

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 27186

GENERATOR:
JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI.

Transporter: INDUSTRIAL MATERIAL CLEARANCE

Vehicle No.: 73

ROLL OFF BOX # 025264

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID, BROWN	Gross Wt.: 25 YRDS
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph J Carter / ENTACT Date: 9-21-01

Transporter Signature: Jeff Horton Date: 9-21-01

Destination Signature: _____ Date: _____

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 22466

GENERATOR:
JCI - STANLEY TOOL WORKS
425 W FRANK ST.
FOWLERVILLE, MI

Transporter: ALL IN ONE DISPOSAL

Vehicle No.: 112

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID, BROWN	Gross Wt.: 77020 LBS. 30 YARD
			Tare Wt.: 51760 LBS.
			Net Wt.: 25260 LBS.

Generator Signature: Joseph [illegible] / ENTACT Date: ~~9-20-01~~ 9-21-01

Transporter Signature: Andy [illegible] Date: 9-21-01

Destination Signature: _____ Date: 306447 MG

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 21467

GENERATOR:
JCI-STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI

Transporter: INDUSTRIAL MATERIAL CLEARANCE

Vehicle No.: 63

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID, BROWN	Gross Wt.: 25 YDS
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph Curtin/ENTACT Date: 9-21-01

Transporter Signature: [signature] Date: 9/21/01

Destination Signature: _____ Date: 306542 MS

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 22468

GENERATOR:

JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI.

Transporter: INDUSTRIAL MATERIAL CLEARAGE

Vehicle No.: 73

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [X] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
CNTRACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID BROWN	25 YDS Gross Wt.:
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph Gustin/CNTRACT Date: 9-21-01

Transporter Signature: Jeff Horton Date: 9-21-01

Destination Signature: _____ Date: 30654/MG

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 22470

GENERATOR:
JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE ST.

Transporter: ALL IN ONE DISPOSAL

Vehicle No.: 112
ROLL OFF BX #025104

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Maple City, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:
ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID BROWN	Gross Wt.:
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph D Cantin / ENTACT Date: 9-21-01

Transporter Signature: [signature] Date: 9 21 01

Destination Signature: _____ Date: _____

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

NON-HAZARDOUS WASTE MANIFEST

NO. 27207

GENERATOR:

JCI - STANLEY TOOL WORKS
425 W. FRANK ST.
FOWLERVILLE, MI.

Transporter: ALL IN ON DISPOSAL

Vehicle No.: 112

DELIVER TO:

- [ ] Autumn Hills RDF (Zeeland, MI)
- [ ] Waters Landfill (Frederic, MI)
- [ ] Eagle Valley RDF (Orion, MI)
- [ ] Glen's Sanitary Landfill (Kawkawlin, MI)
- [ ] Hastings Sanitary Services (Hastings, MI)
- [ ] McGill Road Landfill (Jackson, MI)
- [ ] Northern Oaks RDF (Harrison, MI)
- [ ] Pine Tree Acres, Inc. (Lenox, MI)
- [ ] People's Landfill, Inc. (Birch Run, MI)
- [ ] Tri-City RDF (Carsonville, MI)
- [ ] Venice Park RDF (Lennon, MI)
- [ ] Westside RDF (Three Rivers, MI)
- [x] Woodland Meadows RDF (Van Buren, MI)

Company Responsible for Disposal Charges:

ENTACT

Approval No.	Name of Waste Stream	Physical Description (i.e., solid, color)	Volume
15-1372	CONTAMINATED SOIL	SOLID BROWN	Gross Wt.: 30yd
			Tare Wt.:
			Net Wt.:

Generator Signature: Joseph D Carter/ENTACT Date: 9-19-01

Transporter Signature: Andy Team Date: 9-19-01

Destination Signature: 305773 Date:

White: Generator Canary: Disposal Facility Pink: Carrier Gold: Generator

111-005M

APPENDIX K

APPENDIX K

DISCHARGE DATA FOR THE WILLIAMSTON AND EAST LANSING, MICHIGAN GAUGING STATIONS

APPENDIX I

DISCHARGE DATA FOR THE WILLIAMSTON AND EAST LANSING, MICHIGAN GAUGING STATIONS

WATER RESOURCES DATA
MICHIGAN
WATER YEAR 1989

by: S.P. BLUMER, J.C. FALLING, W.W. LARSON,
C.R. WHITED, AND R.L. LeuVoy

Open File Report 90-255, 283p.
Published in 1990

04111379 RED CEDAR RIVER NEAR WILLIAMSTON, MI

LOCATION.--Lat 42°40'59", long 84°13'09", in NE1/4 sec.4, T.3 N., R.2 E., Ingham County, Hydrologic Unit 04050004, on right bank 20 ft upstream from bridge on State Highway 52, 1.5 mi upstream from Squaw Creek, and 3.5 mi east of Williamston.

DRAINAGE AREA.--163 mi^2.

PERIOD OF RECORD.--July 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 870 ft from topographic map (nearest 10 ft).

REMARKS.--Records good except those for the winter period, which are fair. Several observations of water temperature were made during the year. National Weather Service gage-height telemark at station.

AVERAGE DISCHARGE.--9 years, 99.5 ft^3/s, 8.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft^3/s Mar. 15, 1982, gage height, 8.42 ft; minimum; 2.6 ft^3/s Aug. 24, 27, 1984, gage height, 1.96 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1975, reached a gage height of 10.41 ft Apr. 19, and a discharge of 2,640 ft^3/s Apr. 20.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 360 ft^3/s May 29, gage height, 5.58 ft; minimum, 2.6 ft^3/s Aug. 24, 27, gage height, 1.96 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	30	104	44	35	78	182	155	273	23	10	7.6
2	16	35	89	43	36	74	153	129	230	21	11	7.9
3	16	45	79	44	38	63	133	113	183	21	11	7.7
4	16	45	73	43	41	58	123	104	124	21	14	8.1
5	17	41	72	47	45	58	132	98	94	20	14	7.3
6	17	38	80	48	47	56	170	93	82	21	13	8.8
7	17	36	81	48	45	51	188	89	72	21	12	8.6
8	18	35	88	47	43	64	182	86	64	19	12	7.9
9	20	35	86	46	42	70	164	82	59	19	14	8.0
10	19	34	82	44	47	55	139	79	55	20	16	10
11	20	35	75	40	105	52	120	76	50	29	14	12
12	19	37	128	40	219	61	109	74	47	28	12	13
13	28	37	220	39	288	52	111	74	44	25	11	14
14	35	35	233	39	312	42	119	88	42	22	10	21
15	33	37	226	38	298	45	145	89	40	20	7.9	21
16	29	58	180	38	279	131	178	83	39	19	8.2	18
17	27	74	150	38	261	199	207	75	38	18	7.1	15
18	25	71	110	38	245	189	255	70	36	17	7.7	14
19	24	66	75	38	227	170	277	68	35	16	7.7	13
20	23	72	75	37	205	152	276	68	33	15	6.5	12
21	23	78	80	37	177	211	260	67	32	15	6.8	12
22	23	73	70	37	149	296	238	76	30	15	5.8	11
23	33	79	65	37	129	288	245	153	29	13	6.2	11
24	35	108	60	37	116	296	268	208	29	15	5.3	12
25	35	108	55	36	106	318	276	227	28	14	6.0	15
26	33	97	50	36	96	332	269	284	27	13	5.9	22
27	33	85	47	35	87	317	254	326	26	14	5.1	27
28	32	101	46	35	74	297	230	335	24	14	6.1	28
29	30	127	45	35	74	273	204	354	23	12	5.9	24
30	30	121	45	35	---	245	180	345	23	10	7.5	21
31	30	---	45	35	---	215	---	311	---	11	7.8	---
TOTAL	772	1873	2914	1236	3866	4808	5787	4479	1911	561	287.5	417.9
MEAN	24.9	62.4	94.0	39.9	133	155	193	144	63.7	18.1	9.27	13.9
MAX	35	127	233	48	312	332	277	354	273	29	16	28
MIN	16	30	45	35	35	42	109	67	23	10	5.1	7.3
CFSM	.15	.38	.58	.25	.82	.95	1.18	.88	.39	.11	.06	.09
IN.	.18	.43	.67	.28	.88	1.10	1.32	1.02	.44	.13	.07	.10

CAL YR 1983 TOTAL 39495.1 MEAN 108 MAX 498 MIN 9.1 CFSM .66 IN 9.01
WTR YR 1984 TOTAL 28912.4 MEAN 79.0 MAX 354 MIN 5.1 CFSM .49 IN 6.60

04111379 RED CEDAR RIVER NEAR WILLIAMSTON, MI

LOCATION.--Lat 42°40'59", long 84°13'09", in NE1/4 sec.4, T.3 N., R.2 E., Ingham County, Hydrologic Unit 04050004, on right bank 20 ft upstream from bridge on State Highway 52, 1.5 mi upstream from Squaw Creek, and 3.5 mi east of Williamston.

DRAINAGE AREA.--163 mi^2.

PERIOD OF RECORD.--July 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map (nearest 10 ft).

REMARKS.--Estimated daily discharges: Dec. 6-8, 25-27, and Jan. 2 to Feb. 25. Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 103 ft^3/s, 8.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft^3/s, Feb. 26, 1985, gage height, 9.07 ft; minimum, 2.6 ft^3/s, Aug. 24, 27, 1984, gage height, 1.96 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1975, reached a gage height of 10.41 ft Apr. 19, and a discharge of 2,640 ft^3/s, Apr. 20.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,790 ft^3/s, Feb. 26, gage height, 9.07 ft; minimum, 7.2 ft^3/s, Aug. 12, 13, gage height, 2.15 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	35	47	361	52	958	403	82	139	30	18	29
2	18	30	44	300	50	813	383	75	155	30	18	27
3	16	43	44	340	48	679	362	67	168	30	19	24
4	15	39	43	490	46	609	341	60	168	29	15	22
5	15	37	37	420	45	608	466	59	157	29	15	22
6	15	34	35	370	44	599	869	90	137	29	17	30
7	15	32	32	320	44	531	940	122	113	29	18	43
8	19	31	31	250	44	515	873	133	88	29	17	79
9	23	31	31	150	44	608	772	131	73	28	15	97
10	21	41	33	120	44	611	655	116	79	24	14	96
11	20	73	36	100	44	586	555	94	76	22	13	84
12	18	93	41	90	44	562	469	74	82	22	10	78
13	18	94	53	84	45	513	407	63	89	22	11	69
14	17	83	63	74	45	464	358	54	87	20	11	59
15	17	74	71	70	46	419	316	50	76	26	17	50
16	19	71	75	64	46	378	285	69	76	32	23	44
17	20	66	72	60	47	344	257	86	79	30	26	38
18	20	60	66	56	48	311	237	86	83	27	31	35
19	23	54	61	54	49	284	215	77	81	25	35	33
20	24	49	57	54	51	260	194	67	71	28	31	30
21	34	44	53	54	56	235	173	65	62	27	28	29
22	40	38	88	54	80	213	150	62	58	25	25	28
23	39	39	101	53	300	195	132	55	54	23	22	27
24	35	38	95	53	900	190	120	49	48	21	26	31
25	31	36	80	53	1500	190	124	43	44	19	34	33
26	30	35	50	53	1700	184	128	39	43	29	34	34
27	31	34	65	53	1390	184	125	56	39	24	44	34
28	30	41	83	53	1130	253	114	79	34	21	35	33
29	28	49	151	53	---	386	102	84	34	19	33	30
30	27	50	249	53	---	405	91	76	33	18	34	29
31	25	---	259	54	---	403	---	88	---	18	33	---
TOTAL	722	1494	2246	4813	7982	13490	10616	2351	2526	785	718	1301
MEAN	23.3	49.8	72.5	155	285	435	354	75.8	84.2	25.3	23.2	43.4
MAX	40	94	259	540	1700	958	940	133	168	32	44	97
MIN	15	31	31	53	44	184	91	39	33	18	10	22
AC-FT	14	31	45	95	1.75	2.67	2.17	.47	.52	.16	.14	.27
CFSM	.16	.34	.51	1.10	1.82	3.08	2.42	.54	.58	.18	.16	.30

YR 1984 TOTAL 27815.4 MEAN 76.0 MAX 354 MIN 3.1 CFSM .47 IN 6.39
YR 1985 TOTAL 49044.0 MEAN 134 MAX 1700 MIN 10 CFSM .82 IN 11.19

04111379 RED CEDAR RIVER NEAR WILLIAMSTON, MI

LOCATION.--Lat 42°40'59", long 84°13'09", in NE1/4 sec.4, T.3 N., R.2 E., Ingham County, Hydrologic Unit 04050004, on right bank 20 ft upstream from bridge on State Highway 52, 1.5 mi upstream from Squaw Creek, and 3.5 mi east of Williamston.

DRAINAGE AREA.--163 mi².

PERIOD OF RECORD.--July 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 12 to Mar. 9. Records good. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--11 years, 106 ft³/s, 8.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s, Feb. 26, 1985, gage height, 9.07 ft; minimum, 2.6 ft³/s, Aug. 24, 27, 1984, gage height, 1.96 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1975, reached a stage of 10.41 ft, Apr. 19, and a discharge of 2,640 ft³/s, Apr. 20.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 983 ft³/s, Mar. 14, gage height, 7.74 ft; minimum, 13 ft³/s, Sept. 8, 9; minimum gage height, 2.24 ft, Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	81	224	60	78	110	208	118	56	62	25	23
2	30	74	233	60	90	110	201	113	49	60	24	22
3	30	68	229	60	110	105	194	103	43	58	25	21
4	29	62	215	60	130	103	189	93	40	55	24	21
5	30	58	201	60	250	100	188	86	72	51	23	21
6	32	54	187	60	360	140	203	79	101	47	22	20
7	34	53	171	58	350	150	213	76	106	41	29	19
8	33	51	155	56	300	110	206	71	106	41	29	17
9	34	51	142	56	260	140	189	64	98	51	30	16
10	35	97	133	56	220	271	168	60	90	63	28	18
11	38	152	133	56	180	773	151	55	117	63	26	27
12	40	171	130	56	170	902	136	50	449	60	25	39
13	46	185	120	56	140	929	125	49	592	61	23	37
14	48	198	110	56	122	978	117	44	523	58	22	31
15	48	203	90	56	110	958	130	43	472	53	22	29
16	47	203	100	56	95	836	165	46	452	56	22	27
17	44	206	90	63	90	711	208	48	393	66	23	26
18	43	204	84	120	100	613	225	54	327	67	22	26
19	108	215	90	190	120	595	224	85	281	59	18	26
20	166	260	80	230	150	565	215	113	269	50	17	26
21	177	270	76	235	230	514	207	130	234	43	17	26
22	179	259	74	220	260	496	197	136	201	40	17	41
23	186	249	72	190	260	426	184	132	205	36	19	81
24	196	232	71	170	240	367	167	121	150	33	21	95
25	206	213	69	160	200	336	147	107	108	32	19	102
26	196	207	65	110	170	313	130	90	90	32	21	128
27	176	226	62	78	150	296	117	79	86	31	37	172
28	152	229	60	74	130	279	108	82	85	29	38	185
29	130	228	59	74	---	262	110	81	75	28	32	209
30	110	227	59	73	---	244	116	74	65	26	28	320
31	92	---	60	73	---	226	---	65	---	24	26	---
TOTAL	2745	4986	3644	2982	5065	12958	5138	2547	5935	1476	754	1851
MEAN	88.6	166	118	96.2	181	418	171	82.2	198	47.6	24.3	61.7
MAX	206	270	233	235	360	978	225	136	592	67	38	320
MIN	29	51	59	56	78	100	108	43	40	24	17	16
CFSM	.54	1.02	.72	.59	1.11	2.56	1.05	.50	1.22	.29	.15	.38
IN.	.63	1.14	.83	.68	1.16	2.96	1.17	.58	1.35	.34	.17	.42

CAL YR 1985 TOTAL 55957 MEAN 153 MAX 1700 MIN 10 CFSM .94 IN 12.77
WTR YR 1986 TOTAL 50081 MEAN 137 MAX 978 MIN 16 CFSM .84 IN 11.43

04111379 RED CEDAR RIVER NEAR WILLIAMSTON, MI

LOCATION.--Lat 42°40'59", long 84°13'09", in NE1/4 sec.4, T.3 N., R.2 E., Ingham County, Hydrologic Unit 04050004, on right bank 20 ft upstream from bridge on State Highway 52, 1.5 mi upstream from Squaw Creek, and 3.5 mi east of Williamston.

DRAINAGE AREA.--163 mi².

PERIOD OF RECORD.--July 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 12-15 and Jan. 19 to Feb. 21. Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--12 years, 104 ft³/s, 8.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s, Feb. 26, 1985, gage height, 9.07 ft; minimum, 2.6 ft³/s, Aug. 24, 27, 1984, gage height, 1.96 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1975, reached a stage of 10.41 ft, Apr. 19, and a discharge of 2,640 ft³/s, Apr. 20.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 589 ft³/s, Oct. 5, gage height, 6.60 ft; minimum, 3.8 ft³/s, Aug. 21, gage height, 2.02 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	382	98	103	89	74	183	120	52	114	24	11	28
2	424	94	102	90	78	301	121	50	103	21	12	24
3	456	91	122	90	84	323	132	51	97	19	11	22
4	539	88	159	88	85	317	131	53	80	20	11	20
5	583	84	171	85	82	301	131	50	61	19	11	19
6	552	82	166	82	82	279	175	48	55	18	10	17
7	501	77	157	84	81	261	195	45	56	22	9.2	16
8	449	75	157	88	81	249	187	42	50	23	6.9	15
9	396	74	170	87	81	235	165	39	42	21	11	20
10	340	70	206	84	80	211	135	38	35	26	14	20
11	291	67	215	87	80	183	117	36	31	33	14	25
12	247	65	200	84	79	149	109	38	31	26	12	22
13	208	62	160	82	78	122	105	41	29	22	11	20
14	186	56	130	83	73	112	98	38	25	21	11	17
15	177	60	115	103	70	108	95	52	21	19	9.9	18
16	173	61	103	146	73	108	101	47	19	19	9.7	21
17	164	63	99	142	70	113	107	39	18	19	10	24
18	149	64	110	125	65	118	104	38	17	17	9.2	31
19	133	63	124	100	60	119	95	40	17	14	9.0	36
20	120	62	126	80	58	116	87	42	17	14	6.9	33
21	110	66	122	90	57	112	81	41	21	14	8.4	32
22	103	69	110	100	58	106	75	40	66	15	26	29
23	98	75	102	85	65	102	79	37	52	18	28	27
24	95	85	97	75	70	99	82	34	37	14	25	24
25	93	91	95	68	81	97	77	32	28	18	19	22
26	97	94	94	63	90	104	70	32	24	17	20	20
27	106	107	93	60	93	110	67	30	20	17	37	19
28	112	120	92	61	104	108	65	27	19	15	46	18
29	114	120	91	64	---	104	62	24	19	12	46	21
30	111	112	91	67	---	111	58	21	22	11	40	25
31	105	---	90	70	---	123	---	67	---	11	34	---
TOTAL	7614	2395	3972	2702	2132	5084	3226	1264	1226	579	539.2	685
MEAN	246	79.8	128	87.2	76.1	164	108	40.8	40.9	18.7	17.4	22.8
MAX	583	120	215	146	104	323	195	67	114	33	46	36
MIN	93	56	90	60	57	97	58	21	17	11	6.9	15
CFSM	1.51	.49	.79	.54	.47	1.01	.66	.25	.25	.12	.11	.14
IN.	1.74	.55	.91	.62	.49	1.16	.74	.29	.28	.13	.12	.16

CAL YR 1986 TOTAL 52687.0 MEAN 144 MAX 978 MIN 16 CFSM .88 IN 12.02
WTR YR 1987 TOTAL 31418.2 MEAN 86.1 MAX 583 MIN 6.9 CFSM .53 IN 7.17

04111379 RED CEDAR RIVER NEAR WILLIAMSTON, MI

LOCATION.--Lat 42°40'59", long 84°13'09", in NE1/4 sec.4, T.3 N., R.2 E., Ingham County, Hydrologic Unit 04050004, on right bank 20 ft upstream from bridge on State Highway 52, 1.5 mi upstream from Squaw Creek, and 3.5 mi east of Williamston.

DRAINAGE AREA.--163 mi².

PERIOD OF RECORD.--July 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 11-13, 16-19, 29-31, Jan. 3-15, 21-22, Feb. 4-19, 23-25, and Mar. 1-8, 19. Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--14 years, 105 ft³/s, 8.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s, Feb. 26, 1985, gage height, 9.07 ft; minimum, 2.2 ft³/s, July 13, 14, 1988, gage height, 1.94 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1975, reached a stage of 10.41 ft, Apr. 19, and a discharge of 2,640 ft³/s, Apr. 20.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 649 ft³/s, June 4, gage height, 6.61 ft; minimum, 17 ft³/s, Oct. 16; minimum gage height, 2.29 ft, Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	56	208	153	149	50	277	87	577	239	26	28
2	26	54	189	119	149	45	252	84	603	204	23	33
3	29	52	173	90	128	48	245	82	581	172	23	32
4	28	52	157	72	80	60	282	78	637	135	24	28
5	26	66	145	80	66	120	328	74	603	106	27	25
6	24	132	136	94	64	160	337	70	544	92	26	57
7	22	179	129	90	62	120	335	68	480	84	25	187
8	21	192	122	240	62	95	315	65	409	72	24	231
9	22	197	114	250	62	80	293	63	340	65	22	361
10	22	266	104	210	62	71	269	61	282	58	20	349
11	22	357	64	220	62	77	244	58	230	50	21	282
12	23	345	66	210	62	89	223	57	185	47	22	217
13	22	332	80	160	62	87	210	66	152	44	22	141
14	20	321	90	120	62	87	195	72	132	42	22	111
15	18	299	82	110	63	141	185	70	147	39	25	99
16	18	320	62	108	66	174	177	67	158	36	26	90
17	22	449	65	97	64	158	167	62	152	33	24	112
18	55	479	68	93	60	202	160	58	141	33	22	121
19	76	449	68	99	58	180	157	56	141	32	20	105
20	76	417	70	101	57	321	145	59	206	37	22	87
21	71	404	81	80	57	343	138	61	228	40	23	75
22	67	373	81	76	56	325	135	57	258	38	29	66
23	62	337	99	86	50	297	126	52	275	36	40	60
24	68	306	125	83	50	270	119	48	262	33	32	55
25	80	276	129	83	51	247	115	97	229	31	27	52
26	86	250	117	88	53	235	111	129	194	29	24	48
27	83	254	115	96	52	231	107	122	235	27	22	45
28	77	265	191	95	55	237	101	101	276	28	24	42
29	70	244	180	98	---	286	97	80	268	28	35	40
30	64	226	150	116	---	303	92	84	263	27	31	36
31	58	---	140	134	---	295	---	325	---	27	27	---
TOTAL	1382	7949	3600	3751	1924	5434	5937	2513	9188	1964	780	3215
MEAN	44.6	265	116	121	68.7	175	198	81.1	306	63.4	25.2	107
MAX	86	479	208	250	149	343	337	325	637	239	40	361
MIN	18	52	62	72	50	45	92	48	132	27	20	25
CFSM	.27	1.63	.71	.74	.42	1.07	1.22	.50	1.88	.39	.16	.66
IN.	.32	1.81	.82	.86	.44	1.24	1.35	.57	2.10	.45	.18	.73

CAL YR 1988 TOTAL 36678.6 MEAN 100 MAX 479 MIN 4.4 CFSM .61 IN 8.37
WTR YR 1989 TOTAL 47637.0 MEAN 131 MAX 637 MIN 18 CFSM .80 IN 10.87

04112500 RED CEDAR RIVER AT EAST LANSING, MI

LOCATION.--Lat 42°43'40", long 84°28'40", in SW1/4 sec.18, T.4 N., R.1 W., Ingham County, Hydrologic Unit 04050004, in left downstream bridge abutment of Farm Lane Bridge on Michigan State University Campus in East Lansing, 4.0 mi upstream from Sycamore Creek, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--355 mi^2.

PERIOD OF RECORD.--August 1902 to December 1903, March 1931 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as Red Cedar River at Agricultural College, August 1902 to December 1903 and as Cedar River at East Lansing, March 1931 to September 1965. Gage-height records collected in this vicinity 1911-19, and for flood seasons only 1920-28, are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1307: 1936(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 824.39 ft National Geodetic Vertical Datum of 1929. August 1902 to December 1903 nonrecording gage at site 0.8 mi downstream at different datum. March 1931 to November 1940 water-stage recorder at site 250 ft upstream at present datum.

REMARKS.--Records good. Prior to April 1975, occasional regulation at low flow by mill at Williamston, 16 mi above station. Several observations of water temperature were made during the year. National Weather Service gage-height telemark at station.

AVERAGE DISCHARGE.--54 years, 205 ft^3/s, 7.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,940 ft^3/s Apr. 20, 1975, gage height, 11.95 ft; minimum, 3 ft^3/s July 31, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 24, 1904, reached a stage of 13.4 ft, discharge, 8,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 950 ft^3/s Feb. 14, gage height, 5.44 ft; minimum, 12 ft^3/s Aug. 25, 26, 27, 29, 30; minimum gage height, 3.05 ft Aug. 27, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	47	208	92	74	132	399	291	540	34	23	16
2	34	53	174	92	74	146	351	230	448	34	23	16
3	32	65	149	95	82	132	307	230	379	34	38	16
4	32	67	135	97	92	123	279	212	303	32	26	17
5	34	65	129	102	102	123	299	205	230	32	24	18
6	34	62	142	105	105	120	379	191	191	36	24	17
7	34	60	156	105	97	97	419	180	166	34	40	21
8	38	55	117	100	92	79	387	177	142	32	91	20
9	38	55	149	100	89	100	347	174	129	31	38	20
10	38	55	149	92	89	102	307	166	120	34	38	21
11	36	62	156	89	126	89	268	163	108	65	31	28
12	38	62	268	84	323	79	247	160	95	49	26	24
13	62	62	466	84	645	87	254	177	87	44	23	38
14	74	60	476	84	905	92	268	194	79	36	21	34
15	72	62	431	82	720	102	343	198	77	34	20	49
16	60	87	375	79	555	323	411	188	72	31	18	38
17	53	114	315	79	495	530	471	174	67	28	18	34
18	51	117	219	79	480	431	610	166	65	26	20	29
19	47	111	142	79	462	347	645	163	62	26	18	28
20	44	120	163	84	431	323	583	166	60	26	16	26
21	44	129	180	87	383	525	515	174	57	24	15	26
22	51	126	152	92	335	705	458	214	53	24	15	24
23	60	177	135	87	295	660	466	331	51	24	14	23
24	65	244	126	77	268	565	520	435	49	23	14	23
25	62	226	114	69	240	610	540	448	49	24	14	36
26	57	191	100	72	216	730	505	640	44	24	12	40
27	55	163	97	77	194	730	453	715	42	26	13	49
28	51	208	97	77	174	650	411	680	40	26	14	51
29	49	268	100	77	123	570	363	695	38	28	14	47
30	47	247	97	77	---	510	327	700	34	28	15	42
31	44	---	95	74	---	444	---	635	---	24	15	---
TOTAL	1470	3420	5812	2669	8266	10256	12134	9492	3877	973	731	871
MEAN	47.4	114	187	86.1	285	331	404	306	129	31.4	23.6	29.0
MAX	74	268	476	105	905	730	645	715	540	65	91	51
MIN	32	47	95	69	74	79	247	160	34	23	12	16
CFSM	.13	.32	.53	.24	.80	.93	1.14	.86	.36	.09	.07	.08
IN.	.15	.36	.61	.28	.87	1.07	1.27	.99	.41	.10	.08	.09

CAL YR 1983 TOTAL 86956 MEAN 238 MAX 1260 MIN 26 CFSM .67 IN 9.11
WTR YR 1984 TOTAL 59971 MEAN 164 MAX 905 MIN 12 CFSM .46 IN 6.28

04112500 RED CEDAR RIVER AT EAST LANSING, MI

LOCATION.--Lat 42°43'40", long 84°28'40", in SW1/4 sec.18, T.4 N., R.1 W., Ingham County, Hydrologic Unit 04050004, in left downstream bridge abutment of Farm Lane Bridge on Michigan State University Campus in East Lansing, 4.0 mi upstream from Sycamore Creek, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--355 mi^2.

PERIOD OF RECORD.--August 1902 to December 1903, March 1931 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as Red Cedar River at Agricultural College, August 1902 to December 1903 and as Cedar River at East Lansing, March 1931 to September 1965. Gage-height records collected in this vicinity 1911-19, and for flood seasons only 1920-28, are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1307: 1936(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 824.39 ft above National Geodetic Vertical Datum of 1929. August 1902 to December 1903 nonrecording gage at site 0.8 mi downstream at different datum. March 1931 to November 1940 water-stage recorder at site 250 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 10-20, Feb. 4-6, and Feb. 9-11. Records good except for estimated daily discharges, which are fair. Prior to April 1975, occasional regulation at low flow by mill at Williamston, 16 mi upstream from station. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--55 years, 207 ft^3/s, 7.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,940 ft^3/s, Apr. 20, 1975, gage height, 11.95 ft; minimum, 3 ft^3/s, July 31, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 24, 1904, reached a stage of 13.4 ft, discharge, 8,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,840 ft^3/s, Feb. 26, gage height, 9.46 ft; minimum, 24 ft^3/s, Aug. 14, gage height, 3.12 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	82	108	875	111	1990	935	226	247	65	38	57
2	38	105	102	1100	108	1640	845	216	307	72	38	53
3	36	105	102	1170	105	1360	765	208	307	67	38	49
4	36	87	100	975	100	1190	715	202	268	69	34	47
5	34	82	87	875	96	1230	1020	205	247	77	40	44
6	32	74	87	685	95	1260	2270	261	230	65	40	64
7	44	72	67	565	95	1240	2750	347	205	65	40	79
8	44	69	89	458	95	1160	2360	359	177	60	40	135
9	42	77	89	287	93	1370	1850	335	174	51	36	219
10	47	82	84	250	93	1440	1460	311	163	47	34	226
11	44	163	84	220	94	1320	1200	258	174	44	29	166
12	42	250	89	200	95	1220	990	208	163	44	28	135
13	44	233	108	180	97	1090	855	166	166	42	26	117
14	51	191	146	160	97	950	760	149	160	44	24	102
15	40	166	166	150	97	840	705	132	152	67	33	89
16	38	163	188	140	102	735	610	129	146	57	44	79
17	38	149	177	130	102	655	540	149	142	60	44	72
18	38	135	160	120	105	575	476	160	142	53	65	65
19	49	120	142	115	105	520	435	156	138	55	65	62
20	49	108	132	115	108	466	391	152	129	60	60	57
21	87	97	135	111	114	427	355	142	114	55	53	53
22	74	89	222	111	194	391	323	135	105	51	49	51
23	77	84	279	111	670	367	295	129	100	47	44	70
24	72	84	240	111	1780	367	275	120	89	42	67	65
25	62	84	149	111	3310	363	279	111	79	44	69	57
26	60	82	108	111	3790	347	275	102	74	49	77	62
27	57	82	149	111	3490	367	264	126	69	51	87	60
28	55	97	254	111	2630	765	298	142	65	44	79	57
29	53	105	505	111	---	1140	247	163	62	40	65	53
30	51	111	735	111	---	1180	236	160	62	36	67	53
31	51	---	700	111	---	1040	---	156	---	36	65	---
TOTAL	1525	3428	5783	9991	17971	29005	24739	5815	4656	1659	1540	2498
MEAN	49.2	114	187	322	642	936	825	188	155	53.5	49.7	83.3
MAX	87	250	735	1170	3790	1990	2750	359	307	77	87	226
MIN	32	69	67	111	93	347	236	102	62	36	24	44
CFSM	.14	.32	.53	.91	1.81	2.64	2.32	.53	.44	.15	.14	.24
IN.	.16	.36	.61	1.05	1.88	3.04	2.59	.61	.49	.17	.16	.26

CAL YR 1984 TOTAL 60005 MEAN 164 MAX 905 MIN 12 CFSM .46 IN 6.29
WTR YR 1985 TOTAL 108610 MEAN 298 MAX 3790 MIN 24 CFSM .84 IN 11.38

04112500 RED CEDAR RIVER AT EAST LANSING, MI

LOCATION.--Lat 42°43'40", long 84°28'40", in SW1/4 sec.18, T.4 N., R.1 W., Ingham County, Hydrologic Unit 04050004, in left downstream bridge abutment of Farm Lane Bridge on Michigan State University Campus in East Lansing, 4.0 mi upstream from Sycamore Creek, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--355 mi².

PERIOD OF RECORD.--August 1902 to December 1903, March 1931 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as Red Cedar River at Agricultural College, August 1902 to December 1903 and as Cedar River at East Lansing, March 1931 to September 1965. Gage-height records collected in this vicinity 1911-19, and for flood seasons only 1920-28, are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1307: 1936(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 824.39 ft above National Geodetic Vertical Datum of 1929. August 1902 to December 1903 nonrecording gage at site 0.8 mi downstream at different datum. March 1931 to November 1940 water-stage recorder at site 250 ft upstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Prior to April 1975, occasional regulation at low flow by mill at Williamston, 16 mi upstream from station. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--56 years, 208 ft³/s, 7.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,940 ft³/s, Apr. 20, 1975, gage height, 11.95 ft; minimum, 3 ft³/s, July 31, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 24, 1904, reached a stage of 13.4 ft, discharge, 8,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft³/s, Mar. 12, gage height, 7.43 ft; minimum, 32 ft³/s, Aug. 21, 22, 23, gage height, 3.17 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	172	464	128	153	237	334	230	134	134	44	46
2	50	159	496	125	184	259	330	223	116	128	44	42
3	50	150	478	128	220	251	314	207	104	119	44	40
4	53	143	438	128	270	240	306	191	96	110	42	44
5	59	137	389	128	577	282	310	181	381	102	42	38
6	53	131	355	128	763	351	360	184	381	93	44	38
7	53	128	330	125	763	318	360	184	286	82	53	36
8	55	125	310	119	646	227	330	168	251	96	53	34
9	59	134	294	113	567	339	302	159	217	102	50	34
10	59	217	286	110	478	588	278	153	191	107	53	36
11	62	355	290	110	381	1580	251	143	340	116	48	62
12	72	376	306	116	364	2160	227	134	1330	122	44	64
13	72	385	310	119	326	2200	214	125	1510	116	42	67
14	74	389	255	119	270	2110	200	116	1210	107	40	62
15	80	398	191	116	233	2040	220	110	908	99	42	55
16	72	402	220	116	207	1860	251	113	779	125	40	50
17	72	415	197	122	184	1570	318	116	716	128	38	48
18	85	411	175	207	200	1300	360	131	567	125	38	55
19	248	483	191	420	237	1220	360	200	492	110	38	50
20	451	727	178	492	364	1210	334	274	501	93	34	48
21	456	779	165	496	515	1070	339	298	442	82	32	46
22	411	696	156	464	553	880	343	294	355	74	32	95
23	351	572	156	411	558	752	318	282	330	69	52	233
24	360	492	156	347	510	660	286	259	298	64	48	244
25	411	433	146	339	415	582	263	233	230	67	44	270
26	351	438	134	290	385	539	244	207	194	62	106	343
27	310	543	131	165	330	510	223	188	194	59	128	429
28	274	562	128	156	270	464	217	184	194	55	93	429
29	240	534	128	197	---	429	227	178	168	53	77	558
30	217	487	125	168	---	394	230	165	150	50	59	963
31	194	---	125	153	---	360	---	153	---	48	53	---
TOTAL	5407	11373	7703	6355	10923	26982	8649	5783	13065	2897	1597	4559
MEAN	174	379	248	205	390	870	288	187	436	93.5	51.5	152
MAX	456	779	496	496	763	2200	360	298	1510	134	128	963
MIN	50	125	125	110	153	227	200	110	96	48	32	34
CFSM	.49	1.07	.70	.58	1.10	2.45	.81	.53	1.23	.26	.15	.43
IN.	.57	1.19	.81	.67	1.14	2.83	.91	.61	1.37	.30	.17	.48

CAL YR 1985 TOTAL 122357 MEAN 335 MAX 3790 MIN 24 CFSM .94 IN 12.82
WTR YR 1986 TOTAL 105293 MEAN 288 MAX 2200 MIN 32 CFSM .81 IN 11.03

04112500 RED CEDAR RIVER AT EAST LANSING, MI

LOCATION.--Lat 42°43'40", long 84°28'40", in SW1/4 sec.18, T.4 N., R.1 W., Ingham County, Hydrologic Unit 04050004, in left downstream bridge abutment of Farm Lane Bridge on Michigan State University Campus in East Lansing, 4.0 mi upstream from Sycamore Creek, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--355 mi².

PERIOD OF RECORD.--August 1902 to December 1903, March 1931 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as Red Cedar River at Agricultural College, August 1902 to December 1903 and as Cedar River at East Lansing, March 1931 to September 1965. Gage-height records collected in this vicinity 1911-19, and for flood seasons only 1920-28, are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1307: 1936(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 824.39 ft above National Geodetic Vertical Datum of 1929. August 1902 to December 1903 nonrecording gage at site 0.8 mi downstream at different datum. March 1931 to November 1940 water-stage recorder at site 250 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Sept. 17-21. Records good. Prior to April 1975, occasional regulation at low flow by mill at Williamston, 16 mi upstream from station. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--57 years, 208 ft³/s, 7.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,940 ft³/s, Apr. 20, 1975, gage height, 11.95 ft; minimum, 3 ft³/s, July 31, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 24, 1904, reached a stage of 13.4 ft, discharge, 8,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft³/s, Oct. 5, gage height, 5.98 ft; minimum, 15 ft³/s, Aug. 7, 8, 21, gage height, 3.08 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	188	200	172	143	394	237	125	113	48	20	55
2	1100	184	200	175	153	646	255	119	156	48	20	50
3	1090	181	240	172	165	686	267	113	156	44	20	44
4	1190	175	302	165	175	626	270	113	134	40	20	42
5	1280	168	310	162	162	543	302	110	107	38	18	42
6	1190	165	294	156	156	501	420	107	102	40	17	40
7	1030	162	286	156	175	487	420	104	88	38	17	36
8	870	159	298	159	184	483	381	102	85	38	18	36
9	727	159	326	159	140	451	339	96	77	55	26	38
10	601	156	402	159	181	381	294	90	69	46	20	53
11	506	153	415	159	178	330	255	85	67	53	22	99
12	433	150	372	156	181	294	237	90	62	50	22	64
13	385	140	298	153	181	255	223	88	57	46	20	64
14	368	125	230	156	175	237	214	88	55	38	26	59
15	351	128	263	191	137	223	227	93	48	38	24	44
16	334	131	230	286	134	220	227	93	46	38	18	46
17	314	137	207	282	146	223	227	88	42	36	28	50
18	290	143	207	248	134	230	223	85	42	34	18	65
19	267	143	223	214	119	237	210	88	40	32	18	75
20	248	143	223	143	116	237	194	88	36	30	17	70
21	230	150	223	181	119	237	178	85	99	28	17	65
22	214	153	207	210	128	227	165	82	90	26	93	62
23	200	156	191	172	140	217	162	80	104	26	59	59
24	188	167	181	146	156	210	162	74	80	28	50	53
25	181	168	178	159	175	200	159	72	59	42	42	46
26	184	191	175	150	191	210	153	72	53	40	59	40
27	194	220	168	134	200	220	146	69	46	32	82	42
28	200	230	165	128	223	220	143	62	44	28	85	44
29	204	227	165	128	---	214	137	57	50	24	85	57
30	200	214	165	134	---	220	131	53	50	24	74	53
31	191	---	172	137	---	230	---	55	---	22	67	---
TOTAL	15800	4966	7516	5302	4467	10089	6958	2726	2257	1150	1122	1593
MEAN	510	166	242	171	160	325	232	87.9	75.2	37.1	36.2	53.1
MAX	1280	230	415	286	223	686	420	125	156	55	93	99
MIN	181	125	165	128	116	200	131	53	36	22	17	36
CFSM	1.44	.47	.68	.48	.45	.92	.65	.25	.21	.11	.10	.15
IN.	1.66	.52	.79	.56	.47	1.06	.73	.29	.24	.12	.12	.17

CAL YR 1986 TOTAL 109092 MEAN 299 MAX 2200 MIN 32 CFSM .84 IN 11.43
WTR YR 1987 TOTAL 63946 MEAN 175 MAX 1280 MIN 17 CFSM .49 IN 6.70

04112500 RED CEDAR RIVER AT EAST LANSING, MI

LOCATION.--Lat 42°43'40", long 84°28'40", in SW1/4 sec.18, T.4 N., R.1 W., Ingham County, Hydrologic Unit 04050004, in left downstream bridge abutment of Farm Lane Bridge on Michigan State University Campus in East Lansing, 4.0 mi upstream from Sycamore Creek, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--355 mi².

PERIOD OF RECORD.--August 1902 to December 1903, March 1931 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as Red Cedar River at Agricultural College, August 1902 to December 1903 and as Cedar River at East Lansing, March 1931 to September 1965. Gage-height records collected in this vicinity 1911-19, and 1920-28 (flood seasons only), are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1307: 1936(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 824.39 ft above National Geodetic Vertical Datum of 1929. August 1902 to December 1903 nonrecording gage at site 0.8 mi downstream at different datum. March 1931 to November 1940 water-stage recorder at site 250 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 7, 8, Feb. 5-12, and Mar. 20. Records good. Prior to April 1975, occasional regulation at low flow by mill at Williamston, 16 mi upstream from station. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--59 years, 208 ft³/s, 7.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,940 ft³/s, Apr. 20, 1975, gage height, 11.95 ft; minimum, 3 ft³/s, July 31, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 24, 1904, reached a stage of 13.4 ft, discharge, 8,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,720 ft³/s, June 1, gage height, 6.66 ft; minimum, 42 ft³/s, Aug. 3, 4, 19, 28, gage height, 3.22 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	113	343	270	267	93	529	172	1640	327	52	81
2	72	110	306	223	282	80	469	165	1670	293	49	70
3	59	107	274	162	240	88	469	162	1440	274	45	68
4	57	104	251	128	159	104	572	156	1280	257	57	61
5	55	140	230	134	125	223	676	150	1180	212	113	55
6	53	244	217	168	120	310	686	146	1030	178	63	66
7	50	364	210	170	115	240	636	140	859	161	61	230
8	48	385	200	415	115	194	567	134	691	143	56	423
9	59	381	184	496	115	168	520	131	554	125	54	611
10	55	527	172	402	115	159	478	125	465	110	60	645
11	53	691	104	433	115	178	442	119	384	98	76	538
12	50	732	107	415	115	207	411	122	328	89	84	389
13	50	686	137	314	113	207	402	140	300	84	55	294
14	48	601	146	223	116	200	376	143	273	81	56	225
15	48	520	137	207	122	318	355	143	305	76	67	197
16	55	478	104	230	128	389	347	140	327	72	60	189
17	74	567	107	191	122	347	330	134	300	67	57	202
18	102	727	116	178	113	411	306	131	272	62	50	222
19	150	789	110	181	110	339	290	137	276	64	45	208
20	156	752	116	194	116	640	278	146	381	81	66	182
21	150	701	128	162	113	636	267	143	417	79	55	159
22	137	656	134	143	110	572	259	134	455	81	61	144
23	134	586	159	181	96	520	244	122	442	72	71	127
24	143	501	194	159	93	496	227	113	403	65	73	113
25	162	433	210	159	96	483	223	330	353	60	59	106
26	178	381	191	168	96	483	217	451	312	58	51	101
27	175	402	227	178	99	469	207	310	371	56	46	95
28	159	451	306	181	99	501	197	233	449	54	90	88
29	146	443	347	181	---	606	188	191	416	57	99	84
30	134	394	270	207	---	650	178	223	358	55	81	80
31	122	---	251	240	---	611	---	1030	---	53	65	---
TOTAL	2989	13966	5988	7093	3625	10922	11346	6116	17931	3544	1977	6053
MEAN	96.4	466	193	229	129	352	378	197	598	114	63.8	202
MAX	178	789	347	496	282	650	686	1030	1670	327	113	645
MIN	48	104	104	128	93	80	178	113	272	53	45	55
CFSM	.27	1.31	.54	.65	.36	.99	1.07	.56	1.69	.32	.18	.57
IN.	.31	1.46	.63	.74	.38	1.14	1.19	.64	1.88	.37	.21	.63

CAL YR 1988 TOTAL 71231 MEAN 195 MAX 1180 MIN 12 CFSM .55 IN 7.46
WTR YR 1989 TOTAL 91550 MEAN 251 MAX 1670 MIN 45 CFSM .71 IN 9.59

STREAMS TRIBUTARY TO LAKE MICHIGAN

04112500 RED CEDAR RIVER AT EAST LANSING, MI

LOCATION.--Lat 42°43'40", long 84°28'40", in SW1/4 sec.18, T.4 N., R.1 W., Ingham County, Hydrologic Unit 04050004, in left downstream bridge abutment of Farm Lane Bridge on Michigan State University Campus in East Lansing, 4.0 mi upstream from Sycamore Creek, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--355 mi².

PERIOD OF RECORD.--August 1902 to December 1903, March 1931 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as Red Cedar River at Agricultural College, August 1902 to December 1903 and as Cedar River at East Lansing, March 1931 to September 1965. Gage-height records collected in this vicinity 1911-19, and 1920-28 (flood seasons only), are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1307: 1936(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 824.39 ft above National Geodetic Vertical Datum of 1929. August 1902 to December 1903 nonrecording gage at site 0.8 mi downstream at different datum. March 1931 to November 1940 water-stage recorder at site 250 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 23-29. Records good. Prior to April 1975, occasional regulation at low flow by mill at Williamston, 16 mi upstream from station. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--60 years, 209 ft³/s, 7.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,940 ft³/s, Apr. 20, 1975, gage height, 11.95 ft; minimum, 3 ft³/s, July 31, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 24, 1904, reached a stage of 13.4 ft, discharge, 8,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,700 ft³/s, Mar. 13, gage height, 6.63 ft; minimum, 26 ft³/s, Sept. 2, 3, 4, 5, gage height, 3.14 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	90	259	89	252	557	341	217	181	125	45	29
2	73	88	231	93	245	494	408	203	170	112	43	26
3	69	87	218	96	238	453	471	191	171	97	40	28
4	67	85	188	201	229	416	475	208	176	84	44	28
5	66	89	196	440	225	369	457	230	173	73	45	28
6	67	102	182	520	222	301	435	237	162	65	51	32
7	67	109	156	528	234	266	406	233	149	61	50	88
8	67	113	107	462	310	277	371	217	178	58	44	90
9	67	126	142	405	504	396	338	201	175	58	41	89
10	75	134	154	406	562	839	345	197	156	54	38	71
11	78	130	135	403	509	1320	495	188	136	54	35	56
12	90	128	115	363	427	1610	585	182	122	54	69	47
13	91	118	106	276	378	1690	566	191	112	53	64	44
14	84	124	110	245	360	1610	535	206	150	66	54	62
15	75	239	101	240	306	1410	521	215	158	67	49	62
16	68	485	97	236	294	1200	495	276	140	62	45	96
17	69	596	93	415	297	1020	467	458	118	65	41	86
18	75	607	89	715	260	869	430	613	107	53	38	78
19	90	563	84	706	282	729	386	682	90	56	54	78
20	106	551	82	602	227	615	354	729	81	107	50	69
21	119	591	82	500	215	527	399	746	80	117	52	70
22	120	553	80	429	327	484	498	721	95	104	53	70
23	118	459	79	369	732	479	533	650	105	94	51	66
24	111	372	78	350	957	451	491	565	110	85	48	63
25	104	310	77	424	886	415	444	487	101	75	45	58
26	101	268	76	602	810	388	394	421	89	64	42	55
27	99	267	75	589	745	365	343	362	100	57	39	53
28	98	372	74	492	657	335	295	305	104	53	37	51
29	96	370	74	419	---	296	259	256	131	50	34	51
30	92	307	75	357	---	300	232	218	134	47	32	50
31	91	---	85	294	---	313	---	195	---	46	30	---
TOTAL	2668	8433	3700	12266	11690	20794	12769	10800	3954	2216	1403	1774
MEAN	86.1	281	119	396	418	671	426	348	132	71.5	45.3	59.1
MAX	120	607	259	715	957	1690	585	746	181	125	69	96
MIN	66	85	74	89	215	266	232	182	80	46	30	26
CFSM	.24	.79	.34	1.12	1.18	1.89	1.20	.98	.37	.20	.13	.17
IN.	.28	.88	.39	1.29	1.22	2.18	1.34	1.13	.41	.23	.15	.19

CAL YR 1989 TOTAL 83408 MEAN 229 MAX 1670 MIN 45 CFSM .65 IN 8.74
WTR YR 1990 TOTAL 92467 MEAN 253 MAX 1690 MIN 26 CFSM .71 IN 9.69

APPENDIX L

APPENDIX L

AQUIFER RESPONSE TEST DATA, PHASE I

APPENDIX J

AQUIFER RESPONSE TEST DATA, PHASE I

RESPONSE TEST EVALUATION
(BOUWER & RICE, 1976)

$$K = \frac{r_c^2 \ln(R_e/r_w)}{2L_e} \frac{1}{t} \ln \frac{y_o}{y_t}$$

K = Hydraulic conductivity
L_e = Screen length
R_e = Effective radius (radius over which y dissipates)
r_w = Horizontal distance from well center to original aquifer
r_c = Inside radius of well casing
t = time
y_t = Draw down at time t
y_o = Draw down at t = 0

Equation enables hydraulic conductivity (K) to be calculated from the rise of the water level in the well after an instantaneous removal of a slug of water from the well.

1) Determine $\frac{1}{t} \ln \frac{y_o}{y_t}$
from the best fitting plot of y vs t on semi-log graph paper

2) Determine $\ln \frac{R_e}{r_w}$
from one of the following equations:

- when $L_w < H$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{A+B\ln(H-L_w)/r_w}{L_e/r_w} \right]^{-1}$$

- when $L_w = H$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(Lw/rw)} + \frac{C}{L_e/r_w} \right]^{-1}$$

L_w = initial water column height in well

A, B, & C: dimensions coefficients that are functions of L_e/r_w (see Figure 3 in Bouwer & Rice, 1976)

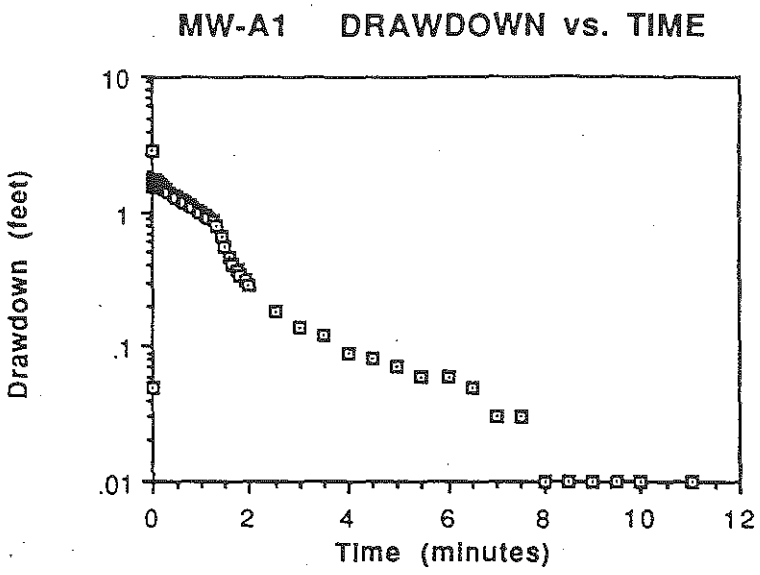
H = Aquifer thickness

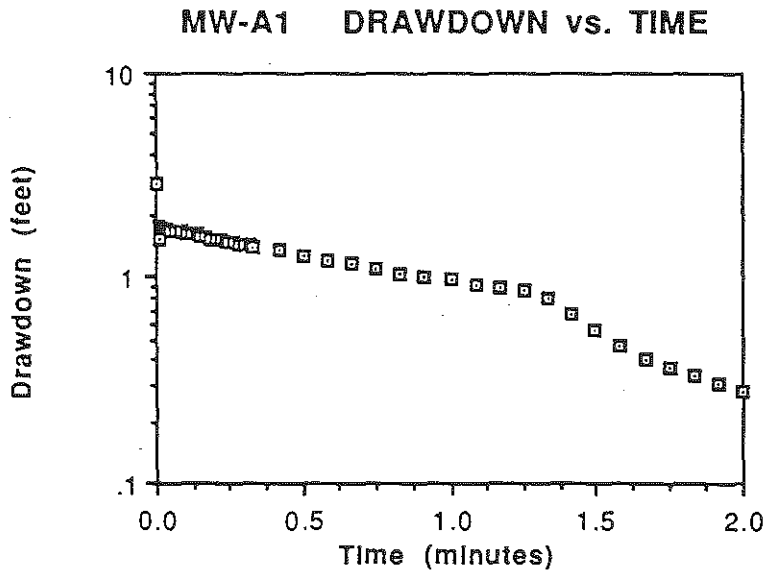
BOUWER AND RICE SLUG TEST CALCULATIONS
STANLEY TOOLS, FOLERVILLE, MICHIGAN

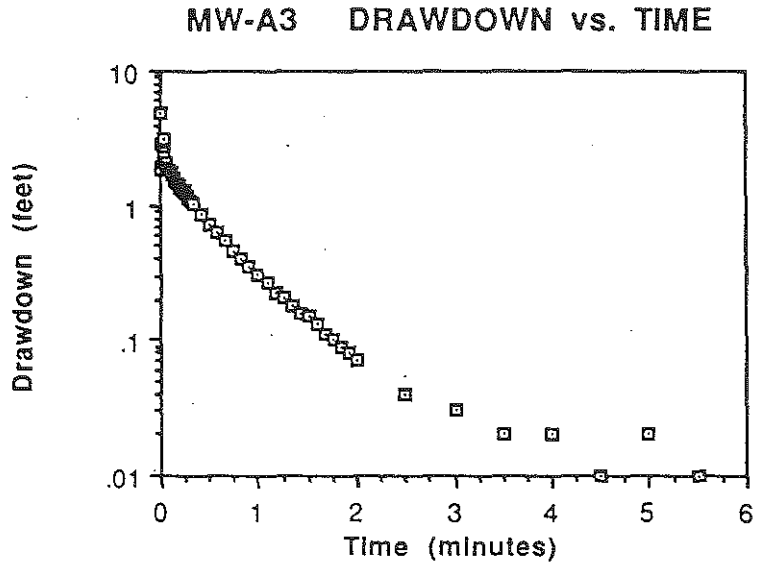
	MW-A1	MW-A3	MW-A4	MW-B1/1	MW-B1/2	MW-B3/1	MW-B3/2	MW-B3/3	MW-C1	MW-E1/1
r-c (ft)	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833
r-w (ft)	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333
Lw (ft)	11.04	13.99	11.42	11.97	11.97	12.57	12.57	12.57	14.44	13.41
H (ft)	13.54	13.99	11.42	11.97	11.97	12.57	12.57	12.57	14.44	13.41
A	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
B	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
C	2	2	2	2	2	2	2	2	2	2
Le (ft)	10	10	10	10	10	10	10	10	10	10
Le' (ft)	10	10	7	5.5	5.5	4.5	4.5	4.5	4.5	4
	adjusted for screen length in impermeable zone									
Le/rw	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030
Le/rw(adjus)	30.0030	30.0030	21.0021	16.5017	16.5017	13.5014	13.5014	13.5014	13.5014	12.0012
	adjusted for screen length in impermeable zone									
ln(Re/r-w):	2.3560	2.7700	2.6461	2.6750	2.6750	2.7050	2.7050	2.7050	2.7891	2.7444
ln(Re/r-w):	2.3560	2.7700	2.4601	2.3344	2.3344	2.2165	2.2165	2.2165	2.2727	2.1534
	adjusted for screen length in impermeable zone									
t-0	0.0099	0.0266	0.02	0.0666	0.0099	0.0033	0.0066	0.0033	0.0099	0.02
t-t	1.25	1.1667	1.4166	1.0833	2	0.4167	0.75	3	1	4.5
t(sec)	1.2401	1.1401	1.3966	1.0167	1.9901	0.4134	0.7434	2.9967	0.9901	4.48
y0 (ft)	1.77	2.46	2.07	2.4	3.29	2.58	2.85	2.41	2.3	2.73
yt(ft)	0.87	0.23	0.76	1.67	1.81	2.22	2.21	0.12	0.06	0.16
ln(yo/yt)/t	0.5727	2.0786	0.7174	0.3567	0.3003	0.3635	0.3421	1.0011	3.6828	0.6332
K (ft/day)	0.6741	2.8766	0.9485	0.4767	0.4013	0.4913	0.4623	1.3528	5.1317	0.8682
K (ft/day)	**0.6741**	**2.8766**	**1.2597**	**0.7564**	**0.6367**	**0.8946**	**0.8419**	**2.4634**	**9.2923**	**1.7032**
	adjusted for screen length in impermeable zone									

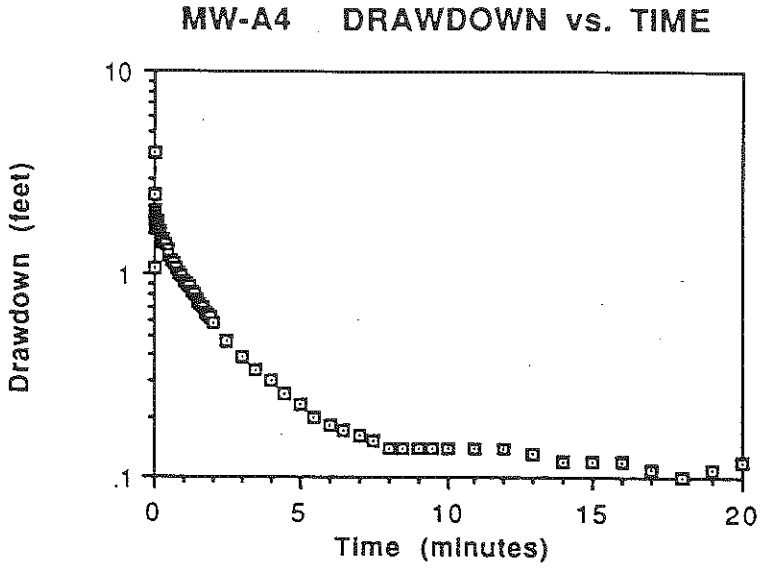
BOUWER AND RICE SLUG TEST CALCULATIONS
STANLEY TOOLS, FOLERVILLE, MICHIGAN

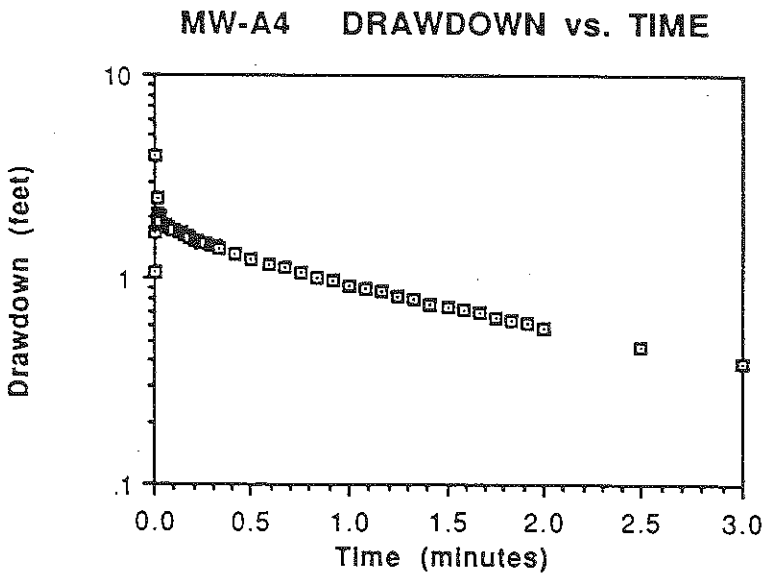
	MW-E1/2	MW-F1	MW-F3	MW-F4	MW-G1/1	MW-G1/2	MW-G3	MW-G4	MW-J1
r-c (ft)	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833
r-w (ft)	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333
Lw (ft)	13.41	14.38	14.98	15.45	16.49	16.49	17.64	17.88	14.82
H (ft)	13.41	16.38	14.98	15.45	16.49	16.49	17.64	17.88	14.82
A	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
B	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
C	2	2	2	2	2	2	2	2	2
Le (ft)	10	10	10	10	10	10	10	10	10
Le' (ft)	4	10	7	9	7.5	7.5	5	9	4
	adjusted for screen length in impermeable zone								
Le/rw	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030	30.0030
Le/rw(adjus)	12.0012	30.0030	21.0021	27.0027	22.5023	22.5023	15.0015	27.0027	12.0012
	adjusted for screen length in impermeable zone								
ln(Re/r-w):	2.7444	2.5037	2.8112	2.8297	2.8686	2.8686	2.9085	2.9165	2.8047
ln(Re/r-w):	2.1534	2.5037	2.6022	2.7716	2.6967	2.6967	2.4362	2.8548	2.1904
	adjusted for screen length in impermeable zone								
t-0	0.0266	0.0099	0.0133	0.0066	0.0166	0.0166	0.02	0.03	0.02
t-t	5	0.5833	0.2	0.3	4	4	5	4.5	1
t(sec)	4.9734	0.5734	0.1867	0.2934	3.9834	3.9834	4.98	4.47	0.98
y0 (ft)	2.89	3.2	2.36	3.29	3.02	4.35	5.34	5.5	2.8
yt(ft)	0.13	0.39	0.6	0.54	0.18	0.29	0.37	0.22	0.29
ln(yo/yt)/t	0.6236	3.6707	7.3352	6.1591	0.7080	0.6798	0.5360	0.7201	2.3138
K (ft/day)	0.8550	4.5914	10.3021	8.7072	1.0146	0.9743	0.7789	1.0493	3.2422
K (ft/day)	**1.6773**	**4.5914**	**13.6232**	**9.4761**	**1.2717**	**1.2212**	**1.3049**	**1.1412**	**6.3302**
	adjusted for screen length in impermeable zone								


MW-A1 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
.01
0
2
4
6
8
10
12
Time (minutes)

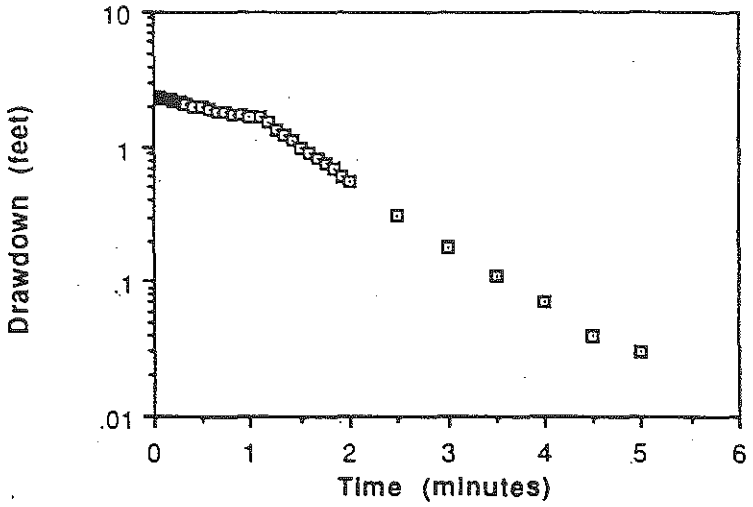

MW-A1 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0.0
0.5
1.0
1.5
2.0
Time (minutes)


MW-A3 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
.01
0
1
2
3
4
5
6
Time (minutes)

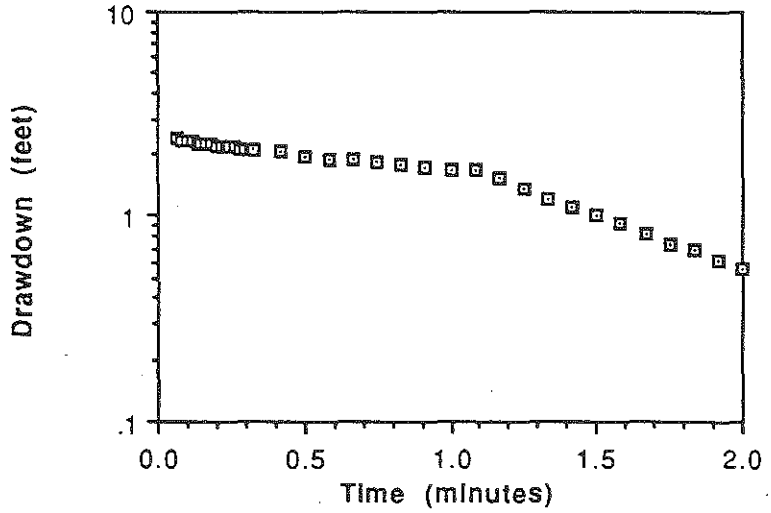

MW-A4 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0
5
10
15
20
Time (minutes)


MW-A4 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (minutes)

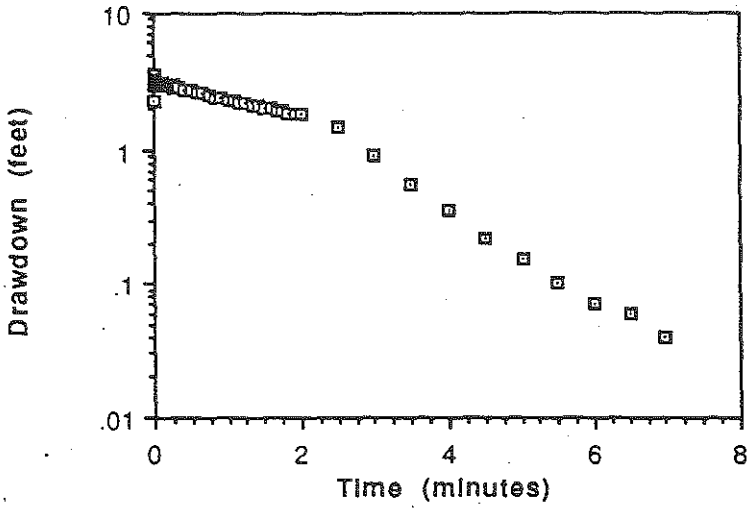
MW-B1 TEST #1 DRAWDOWN vs. TIME



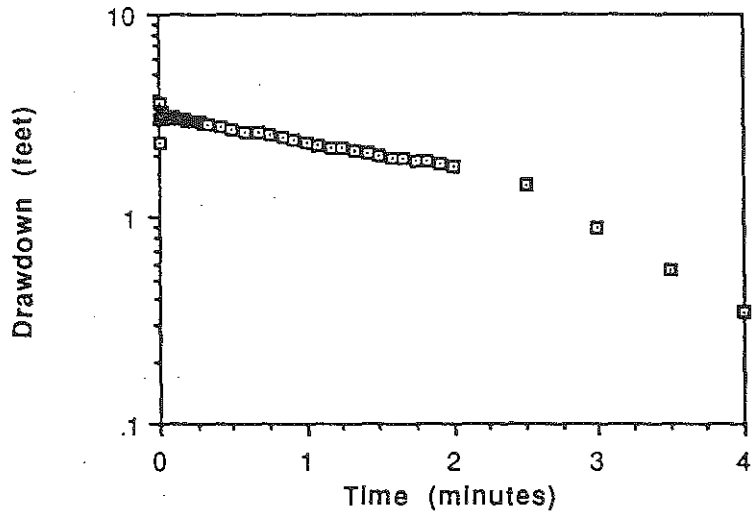
MW-B1 TEST #1 DRAWDOWN vs. TIME



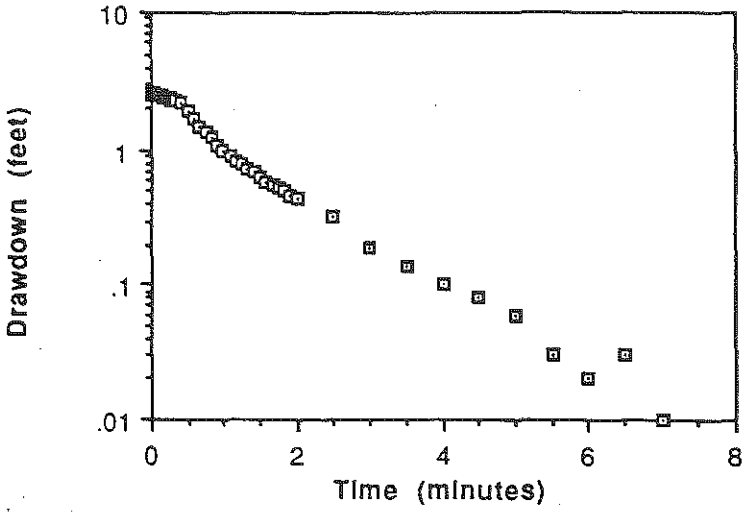
MW-B1 TEST #2 DRAWDOWN vs. TIME



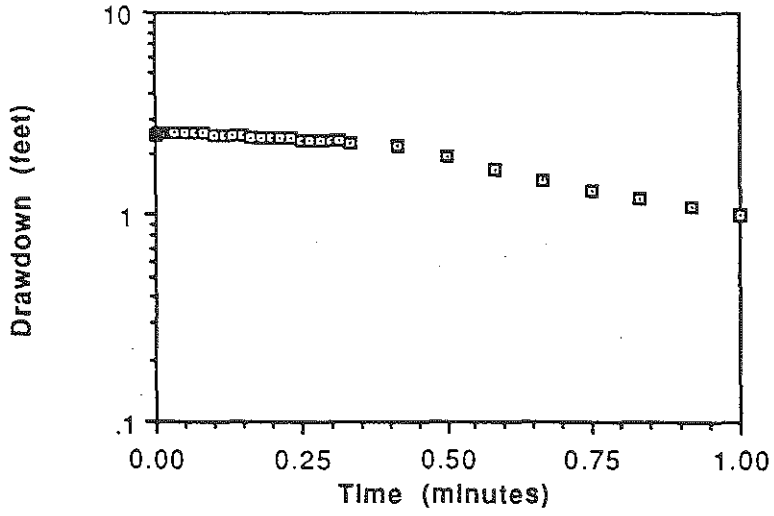
MW-B1 #2 DRAWDOWN vs. TIME



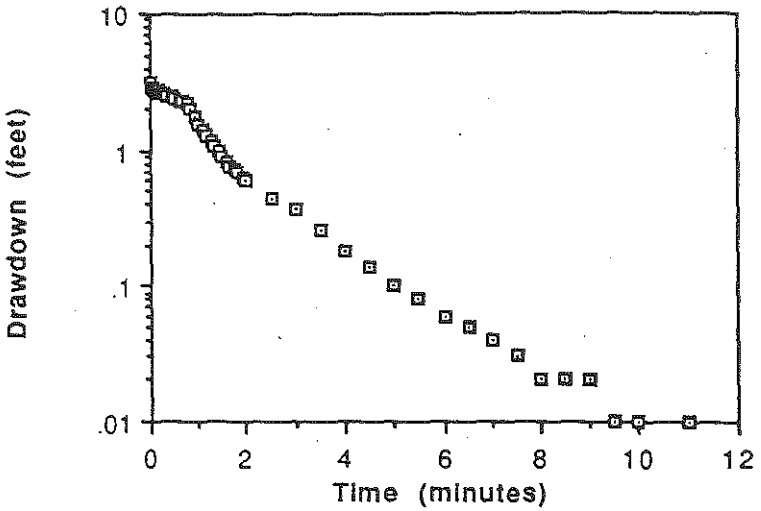
MW-B3 TEST #1 DRAWDOWN vs. TIME



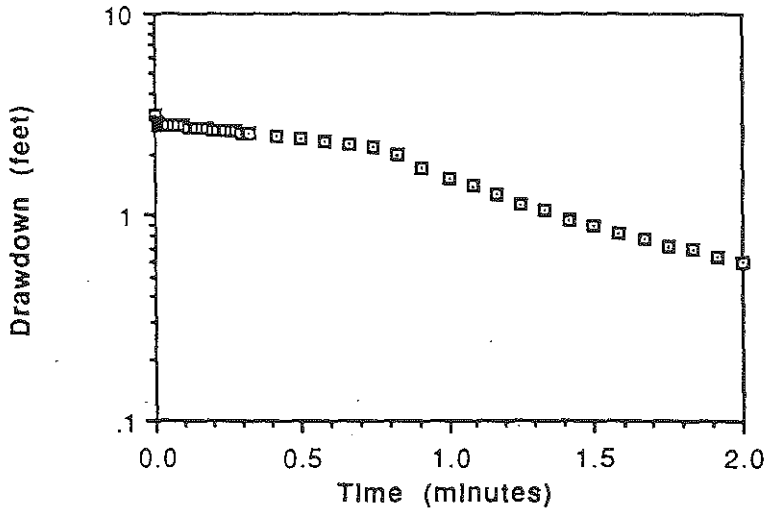
MW-B3 TEST #1 DRAWDOWN vs. TIME



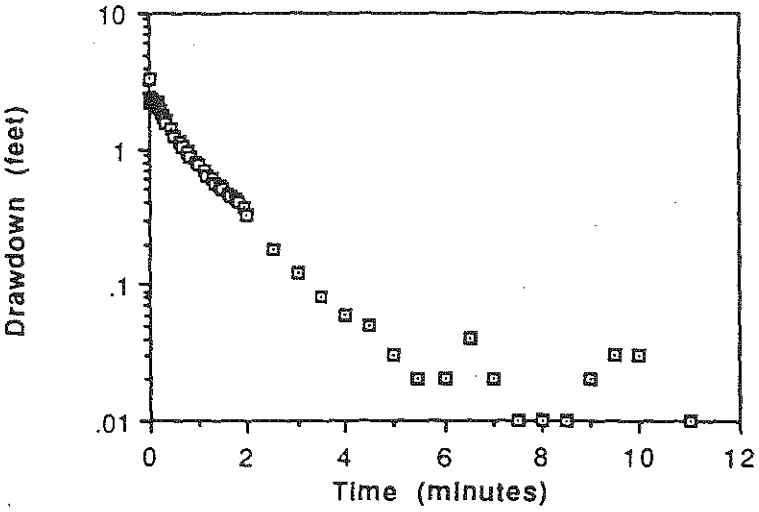
MW-B3 TEST #2 DRAWDOWN vs. TIME



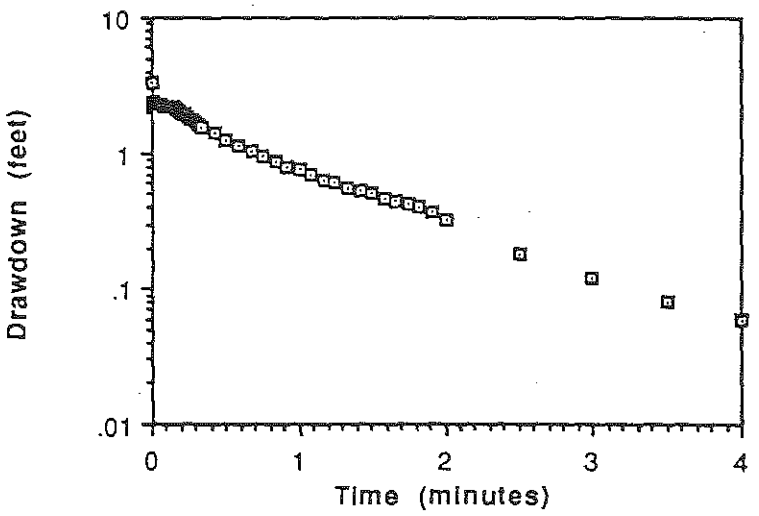
MW-B3 TEST #2 DRAWDOWN vs. TIME

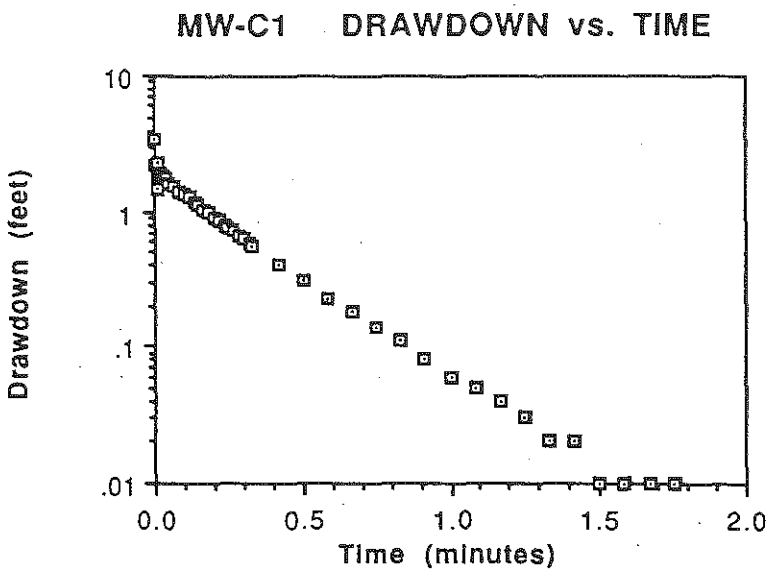


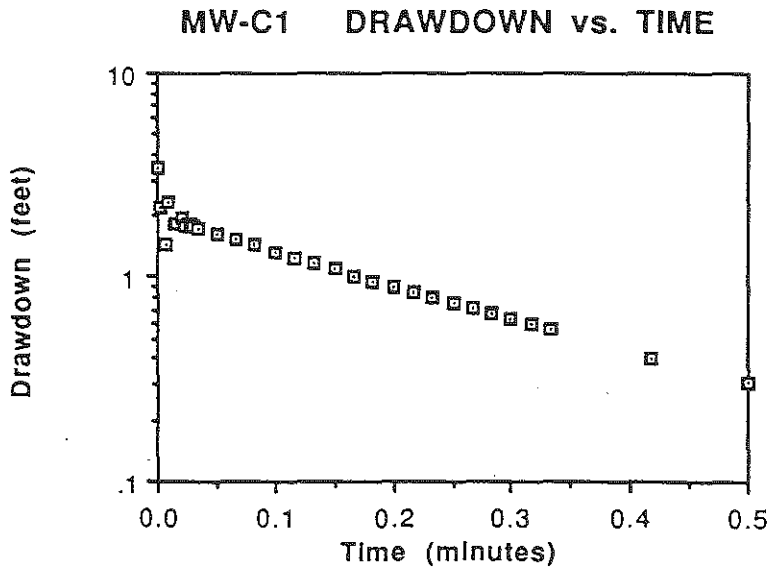
MW-B3 TEST #3 DRAWDOWN vs. TIME



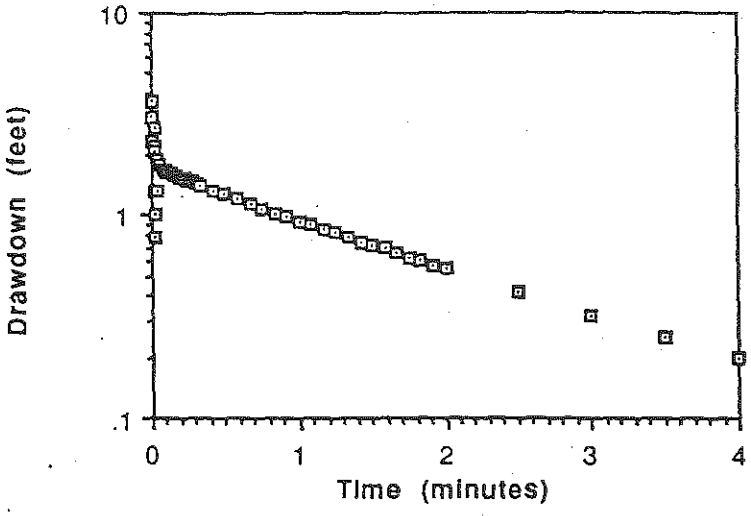
MW-B3 TEST #3 DRAWDOWN vs. TIME



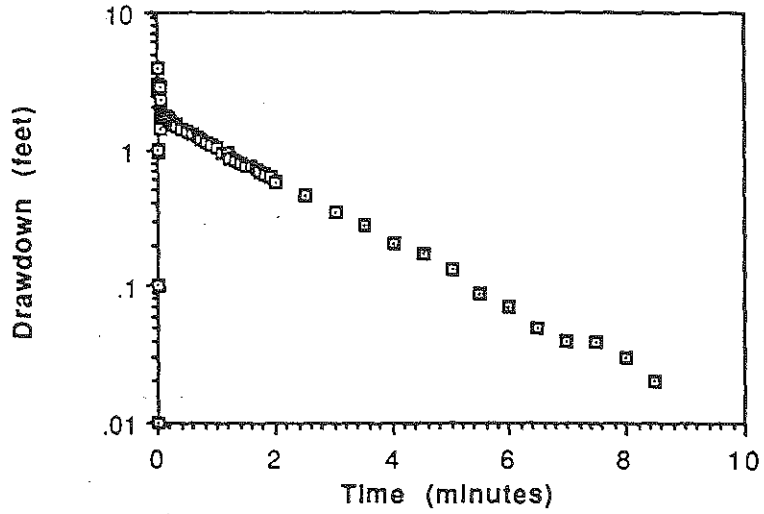

MW-C1 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
.01
0.0
0.5
1.0
1.5
2.0
Time (minutes)

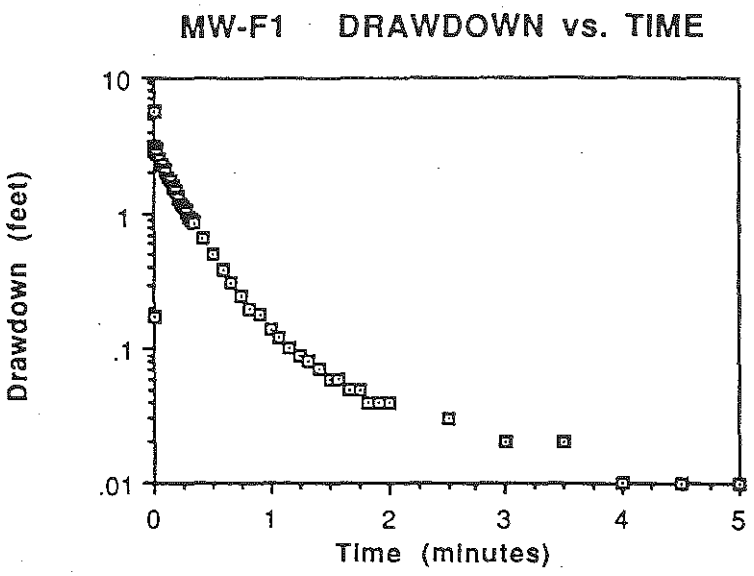

MW-C1 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0.0
0.1
0.2
0.3
0.4
0.5
Time (minutes)

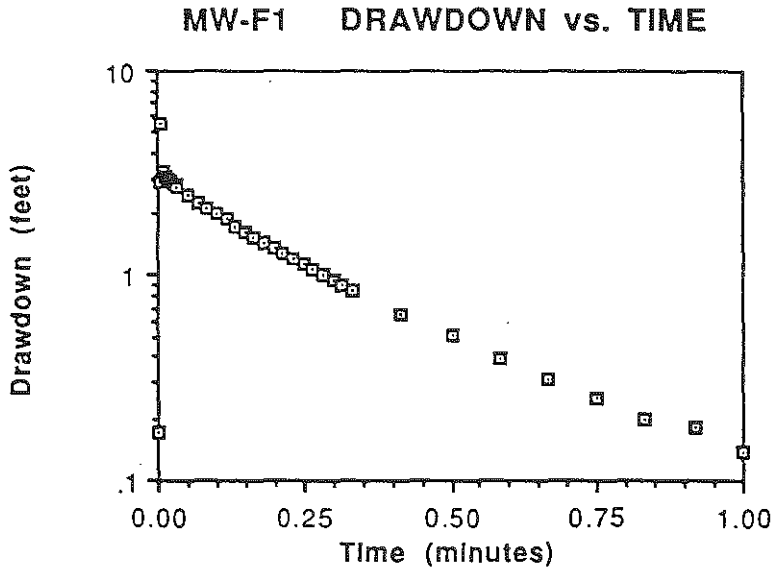
MW-E1 TEST #1 DRAWDOWN vs. TIME

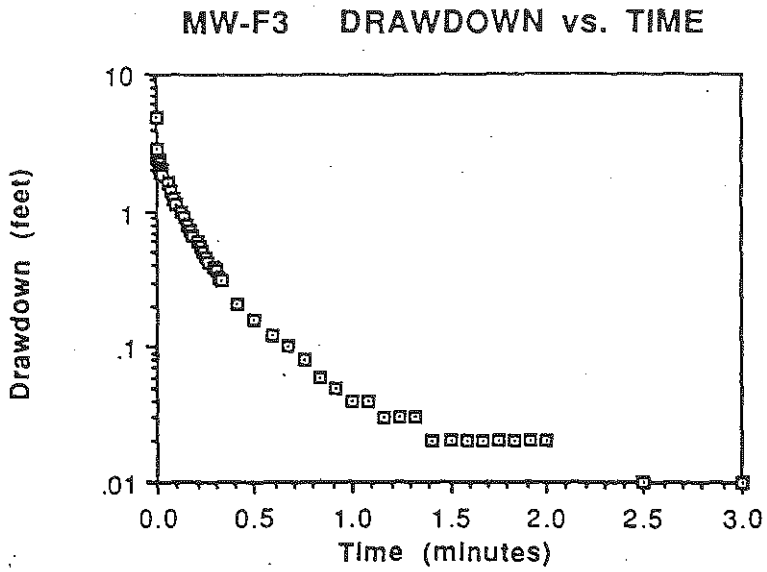


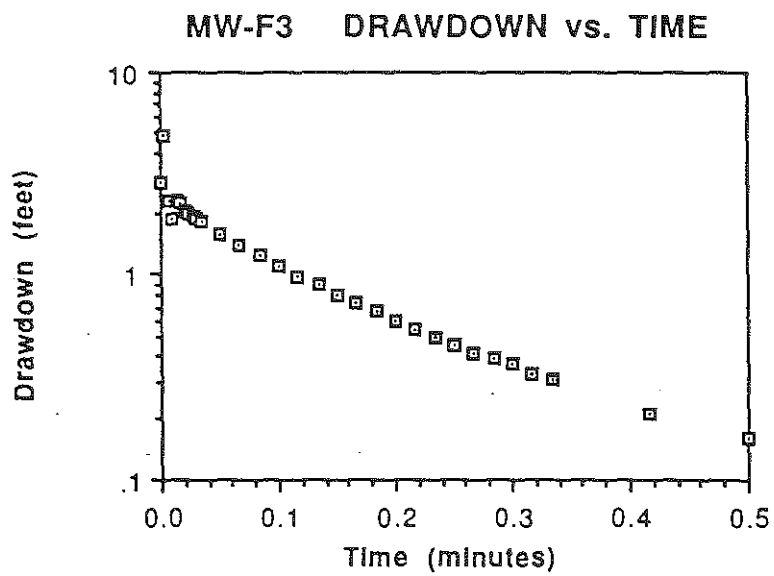
MW-E1 TEST #2 DRAWDOWN vs. TIME

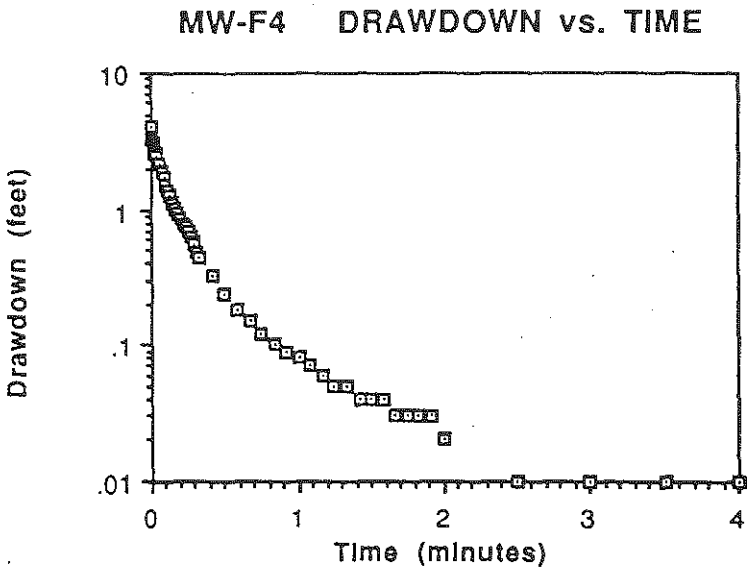


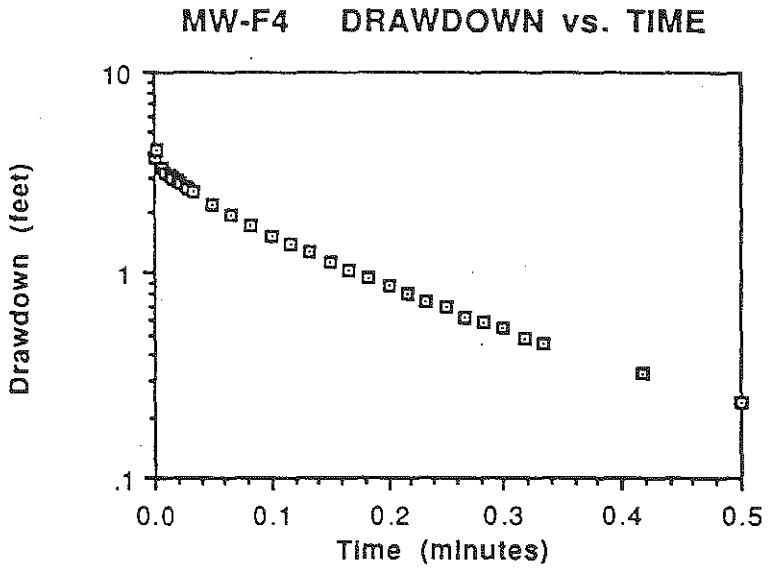

MW-F1 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
.01
0
1
2
3
4
5
Time (minutes)


MW-F1 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0.00
0.25
0.50
0.75
1.00
Time (minutes)

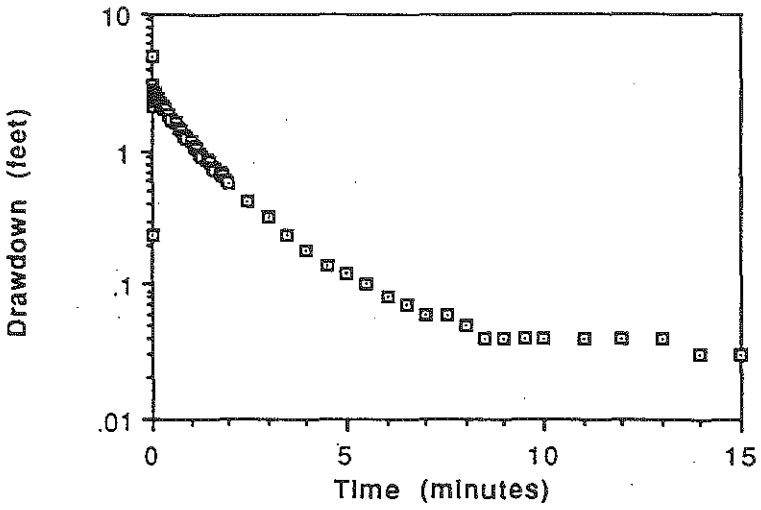

MW-F3 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
.01
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (minutes)


MW-F3 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0.0
0.1
0.2
0.3
0.4
0.5
Time (minutes)

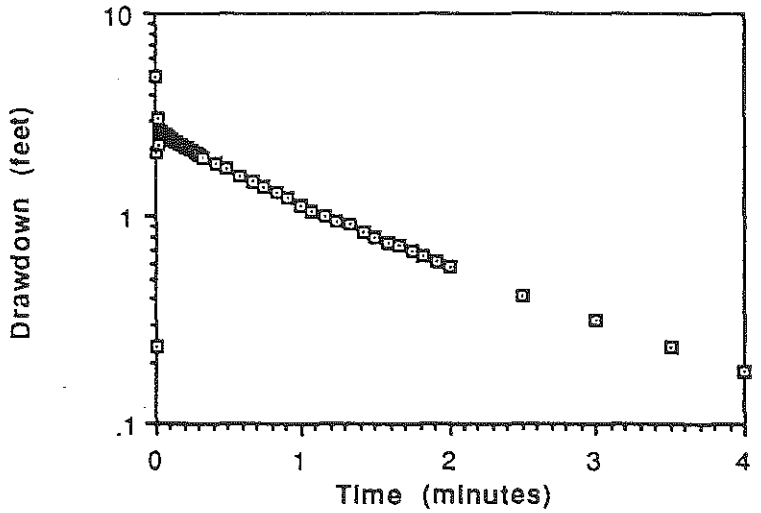

MW-F4 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
.01
0
1
2
3
4
Time (minutes)


MW-F4 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0.0
0.1
0.2
0.3
0.4
0.5
Time (minutes)

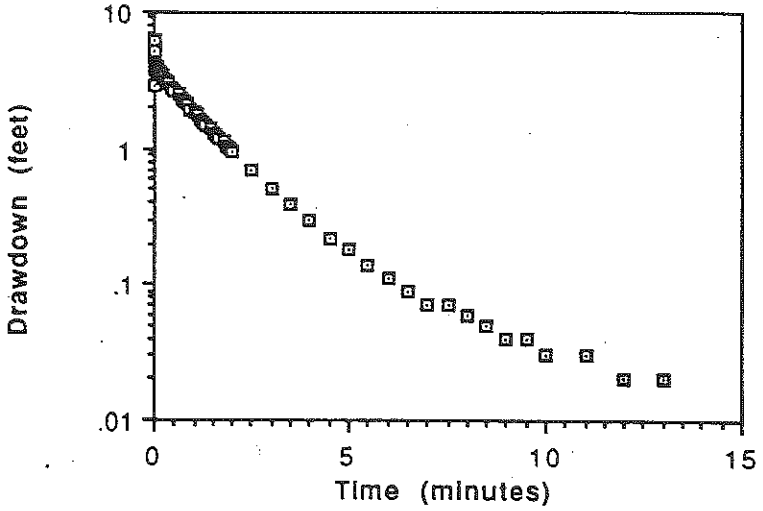
MW-G1 TEST #1 DRAWDOWN vs. TIME



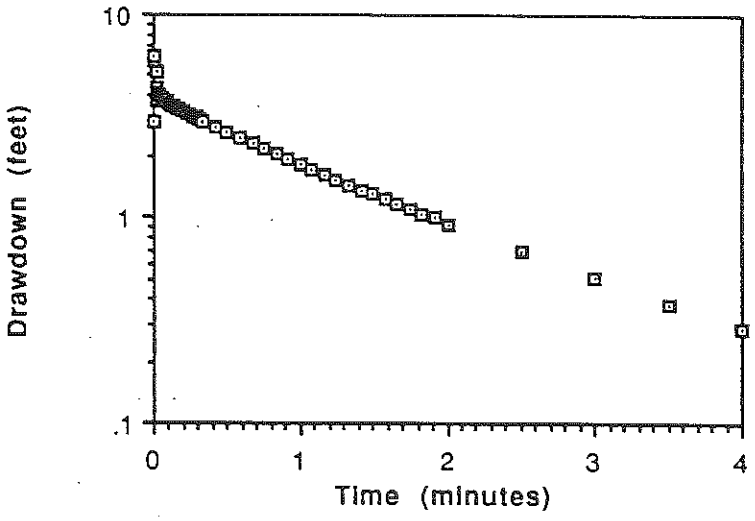
MW-G1 TEST #1 DRAWDOWN vs. TIME



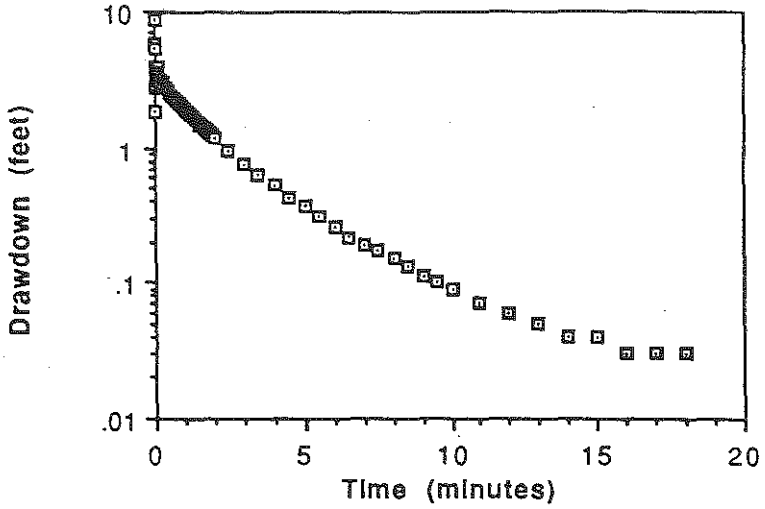
MW-G1 TEST #2 DRAWDOWN vs. TIME



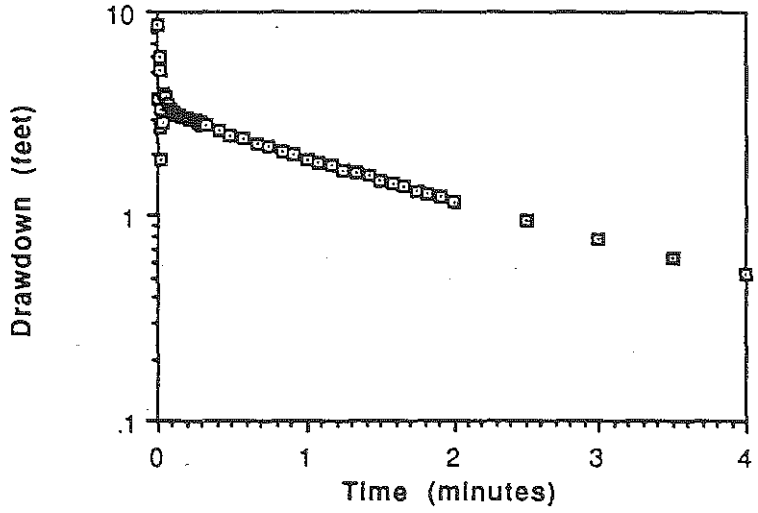
MW-G1 TEST #2 DRAWDOWN vs. TIME

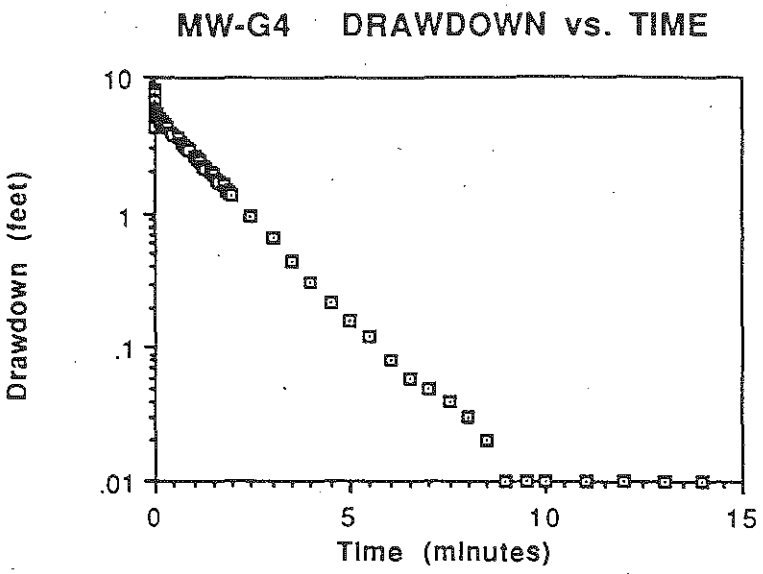


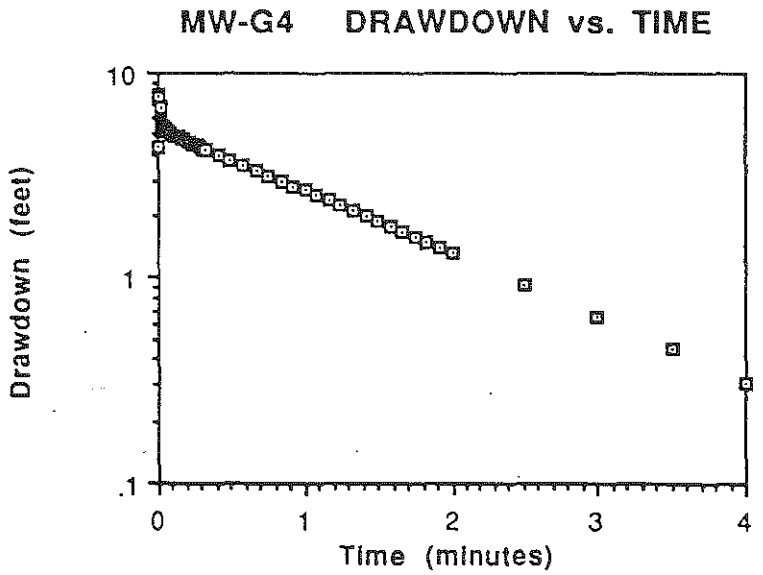
MW-G3 DRAWDOWN vs. TIME



MW-G3 DRAWDOWN vs. TIME




MW-G4 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
.01
0
5
10
15
Time (minutes)


MW-G4 DRAWDOWN vs. TIME
Drawdown (feet)
10
1
.1
0
1
2
3
4
Time (minutes)

RESPONSE TEST EVALUATION
(HVORSLEV, 1951)

$$K_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8\,LT} \quad \text{for} \quad \frac{2mL}{D} > 4$$

K_h	=	Horizontal hydraulic conductivity
D	=	Screen diameter
d	=	Riser diameter
L	=	Screen length
m	=	Transformation ratio
T	=	Basic time lag (time at which $H/H_o = 0.37$)

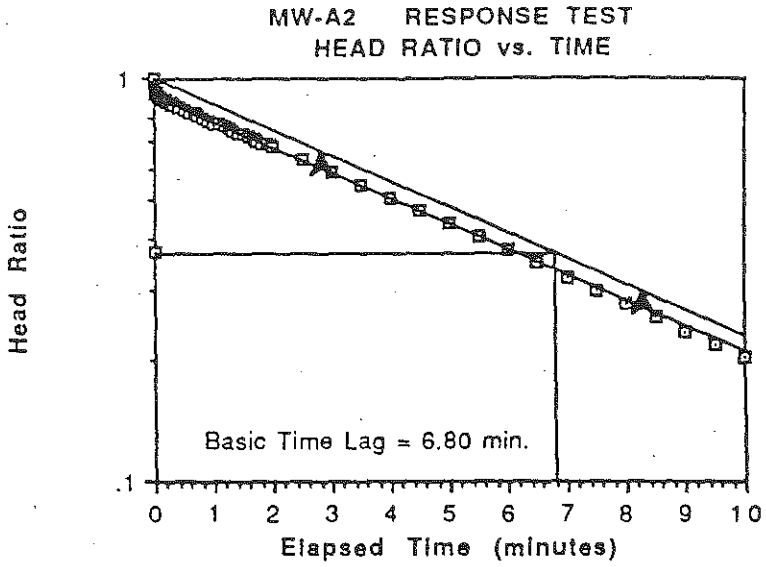
Above equation defined for a well point extended at an impervious boundary.

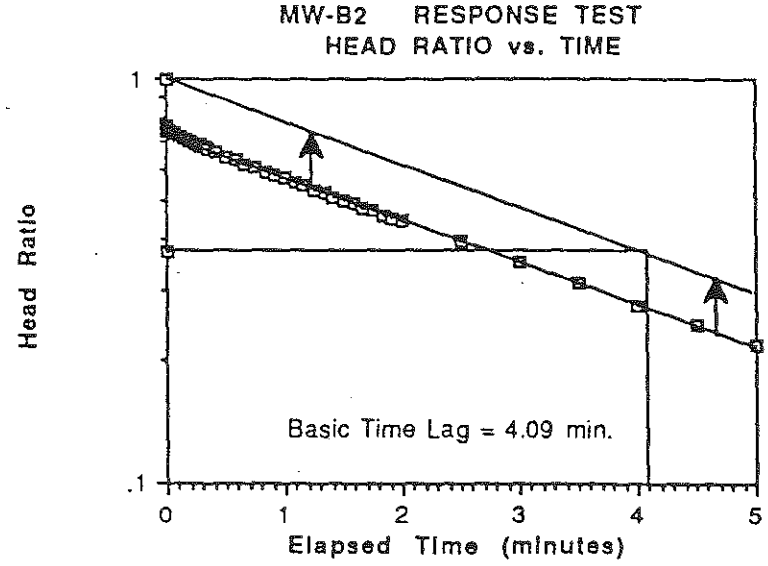
Well Dimensions

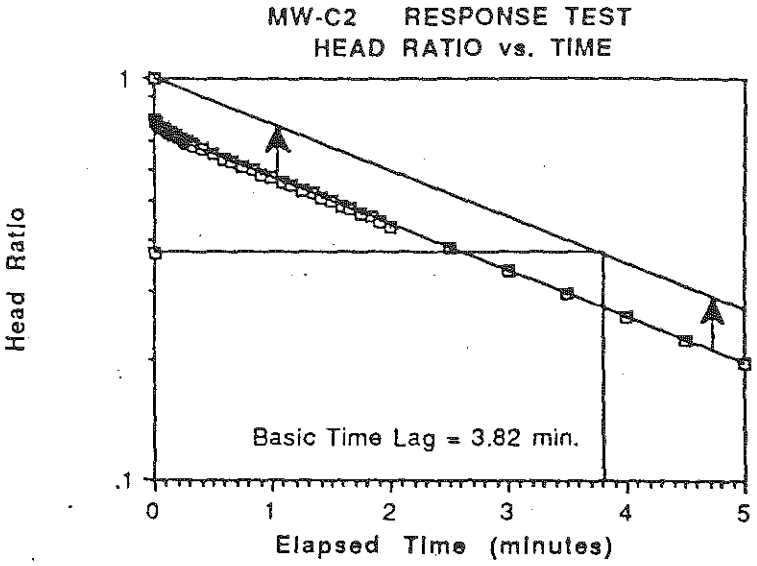
D = 0.17 feet
d = 0.17 feet
L = 5.0 feet

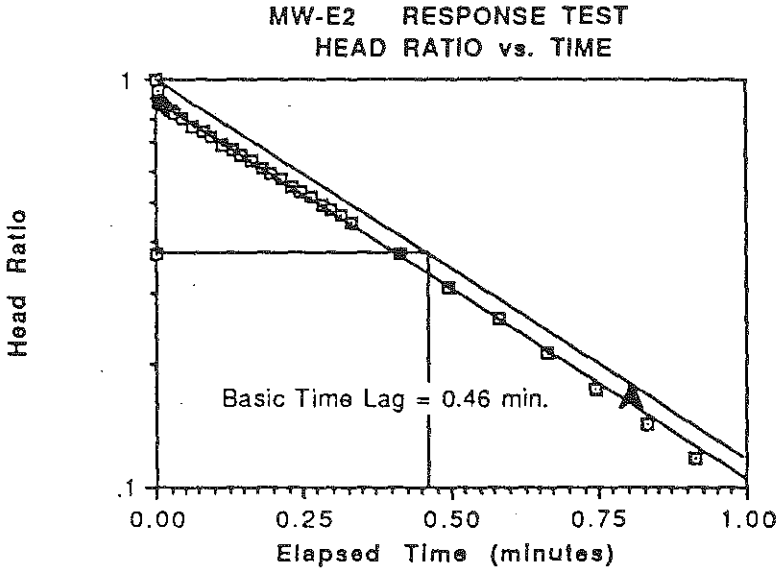
Transformation Ratio

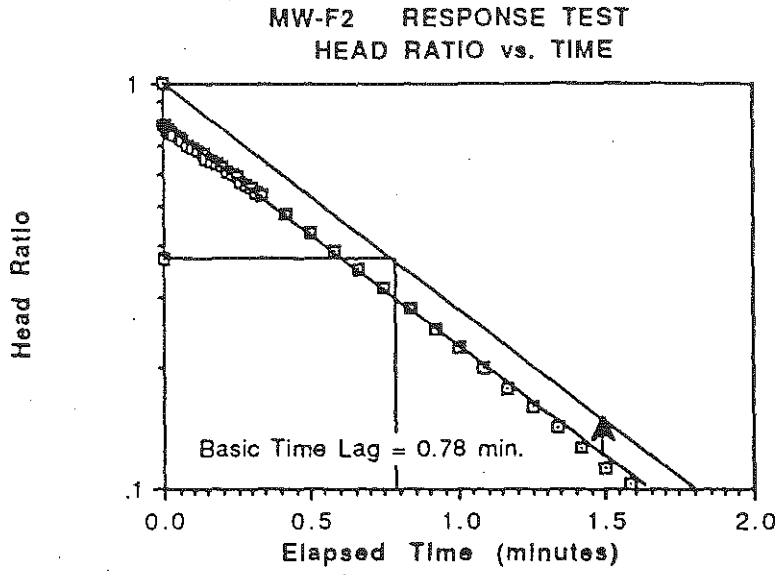
$$m = (k_h/K_v)^{0.5}$$

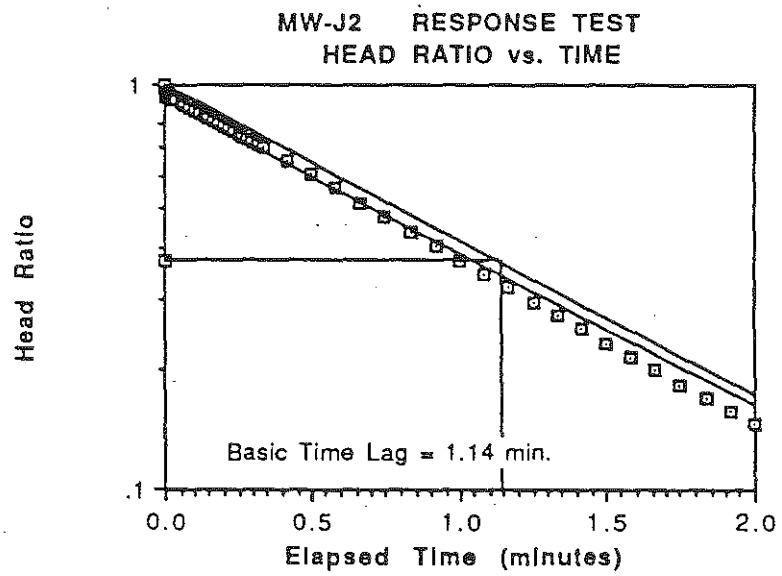

MW-A2 RESPONSE TEST
HEAD RATIO vs. TIME
Head Ratio
1
.1
Basic Time Lag = 6.80 min.
0 1 2 3 4 5 6 7 8 9 10
Elapsed Time (minutes)


MW-B2 RESPONSE TEST
HEAD RATIO vs. TIME
Head Ratio
1
.1
Basic Time Lag = 4.09 min.
0 1 2 3 4 5
Elapsed Time (minutes)


MW-C2 RESPONSE TEST
HEAD RATIO vs. TIME
Head Ratio
1
.1
Basic Time Lag = 3.82 min.
0
1
2
3
4
5
Elapsed Time (minutes)


MW-E2 RESPONSE TEST
HEAD RATIO vs. TIME
Head Ratio
1
.1
Basic Time Lag = 0.46 min.
0.00
0.25
0.50
0.75
1.00
Elapsed Time (minutes)


MW-F2 RESPONSE TEST
HEAD RATIO vs. TIME
Head Ratio
1
.1
Basic Time Lag = 0.78 min.
0.0
0.5
1.0
1.5
2.0
Elapsed Time (minutes)


MW-J2 RESPONSE TEST
HEAD RATIO vs. TIME
Head Ratio
1
.1
Basic Time Lag = 1.14 min.
0.0
0.5
1.0
1.5
2.0
Elapsed Time (minutes)

RAW DATA

AQUIFER RESPONSE TESTS

RESPONSE TEST DATA
MW-BKG TEST 1

SE1000B
Environmental
Logger
05/04 09:43

Unit# 00446 Test# 0

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/02 16:40

Elapsed Time	Value
0.0000	- 14.11
0.0033	- 16.13
0.0066	- 14.95
0.0099	- 15.22
0.0133	- 15.38
0.0166	- 15.65
0.0200	- 15.79
0.0233	- 15.88
0.0266	- 15.93
0.0300	- 16.07
0.0333	- 16.15
0.0500	- 16.59
0.0666	- 16.95
0.0833	- 17.31
0.1000	- 17.66
0.1166	- 17.98
0.1333	- 18.29
0.1500	- 18.60
0.1666	- 18.87
0.1833	- 19.15
0.2000	- 19.41
0.2166	- 19.69
0.2333	- 19.95
0.2500	- 20.19
0.2666	- 20.46
0.2833	- 20.70
0.3000	- 20.94
0.3166	- 21.18
0.3333	- 21.45
0.4167	- 22.62
0.5000	- 23.66
0.5833	- 24.64
0.6667	- 25.54
0.7500	- 26.40
0.8333	- 27.19
0.9167	- 27.94
1.0000	- 28.65
1.0833	- 29.30
1.1667	- 29.92
1.2500	- 30.50
1.3333	- 31.04
1.4166	- 31.60
1.5000	- 32.06
1.5833	- 32.51
1.6667	- 32.93
1.7500	- 33.31
1.8333	- 33.68
1.9167	- 34.02
2.0000	- 34.33
2.5000	- 35.87
3.0000	- 36.92
3.5000	- 37.66
4.0000	- 38.11
4.5000	- 38.40
5.0000	- 38.59
5.5000	- 38.70
6.0000	- 38.79
6.5000	- 38.85
7.0000	- 38.89
7.5000	- 38.94
8.0000	- 38.97
8.5000	- 38.98
9.0000	- 39.00
9.5000	- 39.02
10.0000	- 39.04
11.0000	- 39.07
12.0000	- 39.08

END

RESPONSE TEST DATA
MW-BKG TEST #2

SE1000B
Environmental
Logger
05/04 09:44

Unit# 00446 Test# 1

INPUT 1: Level (F)

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/02 17:15

Elapsed Time	Value
0.0000	0.32
0.0033	0.31
0.0066	0.31
0.0099	0.31
0.0133	0.31
0.0166	0.30
0.0200	0.30
0.0233	0.31
0.0266	0.31
0.0300	0.31
0.0333	0.31
0.0500	0.31
0.0666	- 25.61
0.0833	- 24.06
0.1000	- 23.68
0.1166	- 23.34
0.1333	- 23.05
0.1500	- 22.74
0.1666	- 22.48
0.1833	- 22.21
0.2000	- 21.95
0.2166	- 21.71
0.2333	- 21.46
0.2500	- 21.22
0.2666	- 21.00
0.2833	- 20.76
0.3000	- 20.52
0.3166	- 20.34
0.3333	- 20.11
0.4167	- 19.07
0.5000	- 18.10
0.5833	- 17.11
0.6667	- 16.24
0.7500	- 15.42
0.8333	- 14.63
0.9167	- 13.89
1.0000	- 13.18
1.0833	- 12.52
1.1667	- 11.88
1.2500	- 11.28
1.3333	- 10.70
1.4166	- 10.16
1.5000	- 9.63
1.5833	- 9.14
1.6667	- 8.66
1.7500	- 8.21
1.8333	- 7.75
1.9167	- 7.33
2.0000	- 6.93
2.5000	- 5.01
3.0000	- 3.58
3.5000	- 2.55
4.0000	- 1.78
4.5000	- 1.25
5.0000	- 0.89
5.5000	- 0.66
6.0000	- 0.52
6.5000	- 0.41
7.0000	- 0.34
7.5000	- 0.29
8.0000	- 0.24
8.5000	- 0.21
9.0000	- 0.18
9.5000	- 0.17
10.0000	- 0.15

END

RESPONSE TEST DATA
WELL MW-A1

SE1000B
Environmental Logger
05/04 09:15

Unit# 00446 Test# 6

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 12:01

Elapsed Time	Value
0.0000	0.05
0.0033	2.85
0.0066	1.56
0.0099	1.77
0.0133	1.71
0.0166	1.73
0.0200	1.73
0.0233	1.73
0.0266	1.73
0.0300	1.72
0.0333	1.72
0.0500	1.69
0.0666	1.68
0.0833	1.66
0.1000	1.64
0.1166	1.63
0.1333	1.61
0.1500	1.59
0.1666	1.57
0.1833	1.55
0.2000	1.53
0.2166	1.52
0.2333	1.50
0.2500	1.49
0.2666	1.48
0.2833	1.46
0.3000	1.45
0.3166	1.43
0.3333	1.42
0.4167	1.35
0.5000	1.29
0.5833	1.23
0.6667	1.17
0.7500	1.12
0.8333	1.06
0.9167	1.02
1.0000	0.98
1.0833	0.94
1.1667	0.90
1.2500	0.87
1.3333	0.80
1.4166	0.67
1.5000	0.56
1.5833	0.47
1.6667	0.41
1.7500	0.37
1.8333	0.34
1.9167	0.31
2.0000	0.28
2.5000	0.18
3.0000	0.14
3.5000	0.12
4.0000	0.09
4.5000	0.08
5.0000	0.07
5.5000	0.06
6.0000	0.06
6.5000	0.05
7.0000	0.03
7.5000	0.03
8.0000	0.01
8.5000	0.01
9.0000	0.01
9.5000	0.01
10.0000	0.01
11.0000	0.01

END

RESPONSE TEST DATA
WELL MW-A2

SE1000B
Environmental Logger
05/04 09:24

Unit# 00446 Test# 8

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 14:38

Elapsed Time	Value
0.0000	21.46
0.0033	19.57
0.0066	19.93
0.0099	20.38
0.0133	20.25
0.0166	19.99
0.0200	19.84
0.0233	19.82
0.0266	19.80
0.0300	19.74
0.0333	19.68
0.0500	19.50
0.0666	19.39
0.0833	19.30
0.1000	19.22
0.1166	19.15
0.1333	19.09
0.1500	19.03
0.1666	18.97
0.1833	18.92
0.2000	18.86
0.2166	18.81
0.2333	18.75
0.2500	18.71
0.2666	18.65
0.2833	18.61
0.3000	18.56
0.3166	18.51
0.3333	18.46
0.4167	18.24
0.5000	18.01
0.5833	17.80
0.6667	17.60
0.7500	17.40
0.8333	17.19
0.9167	16.99
1.0000	16.79
1.0833	16.59
1.1667	16.39
1.2500	16.20
1.3333	16.01
1.4166	15.82
1.5000	15.64
1.5833	15.45
1.6667	15.27
1.7500	15.09
1.8333	14.91
1.9167	14.73
2.0000	14.56
2.5000	13.53
3.0000	12.55
3.5000	11.66
4.0000	10.85
4.5000	10.08
5.0000	9.36
5.5000	8.69
6.0000	8.06
6.5000	7.48
7.0000	6.93
7.5000	6.42
8.0000	5.94
8.5000	5.49
9.0000	5.07
9.5000	4.68
10.0000	4.33
11.0000	3.69
12.0000	3.12
13.0000	2.64
14.0000	2.25
15.0000	1.94
16.0000	1.63
17.0000	1.38
18.0000	1.19
19.0000	1.03
20.0000	0.89
21.0000	0.77
22.0000	0.67
23.0000	0.58
24.0000	0.51
25.0000	0.46
26.0000	0.40
27.0000	0.37
28.0000	0.33
29.0000	0.30
30.0000	0.27
31.0000	0.24
32.0000	0.23
33.0000	0.20
34.0000	0.19
35.0000	0.18
36.0000	0.18
37.0000	0.17
38.0000	0.16
39.0000	0.15
40.0000	0.14
41.0000	0.12
42.0000	0.13
43.0000	0.13
44.0000	0.12

END

RESPONSE TEST DATA
WELL MW-A3

SE1000B
Environmental Logger
05/04 09:22

Unit# 00446 Test# 7

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 13:50

Elapsed Time	Value
0.0000	0.00
0.0033	2.89
0.0066	5.01
0.0099	1.96
0.0133	1.82
0.0166	3.10
0.0200	2.43
0.0233	2.06
0.0266	2.46
0.0300	2.32
0.0333	2.13
0.0500	2.06
0.0666	1.92
0.0833	1.82
0.1000	1.73
0.1166	1.65
0.1333	1.58
0.1500	1.51
0.1666	1.46
0.1833	1.40
0.2000	1.35
0.2166	1.31
0.2333	1.26
0.2500	1.21
0.2666	1.16
0.2833	1.12
0.3000	1.09
0.3166	1.05
0.3333	1.02
0.4167	0.86
0.5000	0.73
0.5833	0.62
0.6667	0.54
0.7500	0.46
0.8333	0.40
0.9167	0.35
1.0000	0.31
1.0833	0.27
1.1667	0.23
1.2500	0.21
1.3333	0.18
1.4166	0.16
1.5000	0.15
1.5833	0.13
1.6667	0.11
1.7500	0.10
1.8333	0.09
1.9167	0.08
2.0000	0.07
2.5000	0.04
3.0000	0.03
3.5000	0.02
4.0000	0.02
4.5000	0.01
5.0000	0.02
5.5000	0.01
6.0000	0.00
6.5000	0.00
7.0000	0.00
7.5000	0.00
8.0000	0.00
8.5000	0.00
9.0000	0.00
9.5000	0.00
10.0000	- 0.00
11.0000	0.00

END

RESPONSE TEST DATA
WELL MW-A4

SE1000B
Environmental Logger
05/04 09:35

Unit# 00446 Test# 9

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 15:46

Elapsed Time	Value
0.0000	1.09
0.0033	4.04
0.0066	1.68
0.0099	2.05
0.0133	2.45
0.0166	1.84
0.0200	2.07
0.0233	2.03
0.0266	1.90
0.0300	1.96
0.0333	1.91
0.0500	1.85
0.0666	1.80
0.0833	1.75
0.1000	1.72
0.1166	1.68
0.1333	1.66
0.1500	1.64
0.1666	1.61
0.1833	1.58
0.2000	1.56
0.2166	1.54
0.2333	1.51
0.2500	1.49
0.2666	1.49
0.2833	1.46
0.3000	1.45
0.3166	1.43
0.3333	1.41
0.4167	1.32
0.5000	1.26
0.5833	1.19
0.6667	1.13
0.7500	1.08
0.8333	1.03
0.9167	0.98
1.0000	0.94
1.0833	0.91
1.1667	0.87
1.2500	0.83
1.3333	0.80
1.4166	0.76
1.5000	0.74
1.5833	0.71
1.6667	0.68
1.7500	0.65
1.8333	0.64
1.9167	0.61
2.0000	0.58
2.5000	0.47
3.0000	0.39
3.5000	0.34
4.0000	0.30
4.5000	0.26
5.0000	0.23
5.5000	0.20
6.0000	0.18
6.5000	0.17
7.0000	0.16
7.5000	0.15
8.0000	0.14
8.5000	0.14
9.0000	0.14
9.5000	0.14
10.0000	0.14
11.0000	0.14
12.0000	0.14
13.0000	0.13
14.0000	0.12
15.0000	0.12
16.0000	0.12
17.0000	0.11
18.0000	0.10
19.0000	0.11
20.0000	0.12

END

RESPONSE TEST DATA
MW-B1 TEST #1

SE1000B
Environmental
Logger
05/04 17:17

Unit# 00446 Test# 3

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/04 14:49

Elapsed Time	Value
0.0000	- 0.01
0.0033	- 0.02
0.0066	- 0.07
0.0099	- 0.09
0.0133	- 0.13
0.0166	- 0.16
0.0200	- 0.18
0.0233	- 0.20
0.0266	- 0.23
0.0300	- 0.26
0.0333	- 0.27
0.0500	- 0.35
0.0666	2.40
0.0833	2.34
0.1000	2.34
0.1166	2.31
0.1333	2.29
0.1500	2.27
0.1666	2.25
0.1833	2.24
0.2000	2.23
0.2166	2.21
0.2333	2.20
0.2500	2.18
0.2666	2.17
0.2833	2.15
0.3000	2.14
0.3166	2.12
0.3333	2.11
0.4167	2.05
0.5000	1.98
0.5833	1.92
0.6667	1.87
0.7500	1.83
0.8333	1.79
0.9167	1.75
1.0000	1.70
1.0833	1.67
1.1667	1.53
1.2500	1.37
1.3333	1.23
1.4166	1.11
1.5000	1.00
1.5833	0.92
1.6667	0.83
1.7500	0.74
1.8333	0.68
1.9167	0.61
2.0000	0.56
2.5000	0.31
3.0000	0.18
3.5000	0.11
4.0000	0.07
4.5000	0.04
5.0000	0.03

END

RESPONSE TEST DATA
MW-B1 TEST #2

SE1000B
Environmental
Logger
05/04 17:19

Unit# 00446 Test# 4

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/04 15:11

Elapsed Time	Value
0.0000	2.34
0.0033	3.59
0.0066	3.01
0.0099	3.29
0.0133	3.14
0.0166	3.21
0.0200	3.17
0.0233	3.19
0.0266	3.17
0.0300	3.18
0.0333	3.17
0.0500	3.15
0.0666	3.13
0.0833	3.11
0.1000	3.09
0.1166	3.07
0.1333	3.05
0.1500	3.03
0.1666	3.02
0.1833	3.00
0.2000	2.99
0.2166	2.98
0.2333	2.96
0.2500	2.94
0.2666	2.92
0.2833	2.90
0.3000	2.88
0.3166	2.87
0.3333	2.86
0.4167	2.78
0.5000	2.71
0.5833	2.64
0.6667	2.59
0.7500	2.52
0.8333	2.44
0.9167	2.39
1.0000	2.33
1.0833	2.27
1.1667	2.23
1.2500	2.17
1.3333	2.12
1.4166	2.07
1.5000	2.03
1.5833	1.98
1.6667	1.93
1.7500	1.89
1.8333	1.87
1.9167	1.84
2.0000	1.81
2.5000	1.44
3.0000	0.89
3.5000	0.56
4.0000	0.35
4.5000	0.22
5.0000	0.15
5.5000	0.10
6.0000	0.07
6.5000	0.06
7.0000	0.04

END

RESPONSE TEST DATA MW-B2

SE1000B
Environmental Logger
05/04 17:13

Unit# 00446 Test# 2

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/04 13:32

Elapsed Time	Value
0.0000	- 0.42
0.0033	29.72
0.0066	22.84
0.0099	22.59
0.0133	22.16
0.0166	22.13
0.0200	22.18
0.0233	22.10
0.0266	22.01
0.0300	21.98
0.0333	21.97
0.0500	21.80
0.0666	21.68
0.0833	21.55
0.1000	21.44
0.1166	21.34
0.1333	21.23
0.1500	21.15
0.1666	21.02
0.1833	20.93
0.2000	20.82
0.2166	20.72
0.2333	20.61
0.2500	20.51
0.2666	20.43
0.2833	20.33
0.3000	20.23
0.3166	20.12
0.3333	20.04
0.4167	19.58
0.5000	19.15
0.5833	18.73
0.6667	18.32
0.7500	17.94
0.8333	17.56
0.9167	17.19
1.0000	16.84
1.0833	16.49
1.1667	16.15
1.2500	15.82
1.3333	15.50
1.4166	15.18
1.5000	14.88
1.5833	14.59
1.6667	14.26
1.7500	13.95
1.8333	13.68
1.9167	13.40
2.0000	13.13
2.5000	11.66
3.0000	10.37
3.5000	9.20
4.0000	8.16
4.5000	7.27
5.0000	6.50
5.5000	5.82
6.0000	5.23
6.5000	4.70
7.0000	4.24
7.5000	3.81
8.0000	3.48
8.5000	3.18
9.0000	2.90
9.5000	2.66
10.0000	2.45
11.0000	2.06
12.0000	1.78
13.0000	1.55
14.0000	1.35
15.0000	1.19
16.0000	1.06
17.0000	0.96
18.0000	0.87
19.0000	0.79
20.0000	0.73
21.0000	0.66
22.0000	0.61
23.0000	0.56
24.0000	0.53
25.0000	0.50
26.0000	0.46
27.0000	0.43
28.0000	0.41
29.0000	0.38
30.0000	0.37
31.0000	0.36
32.0000	0.34
33.0000	0.32
34.0000	0.32
35.0000	0.30
36.0000	0.29
37.0000	0.28
38.0000	0.27
39.0000	0.27
40.0000	0.25
41.0000	0.24
42.0000	0.24
43.0000	0.23
44.0000	0.22
45.0000	0.22
46.0000	0.21
47.0000	0.21
48.0000	0.20
49.0000	0.20
50.0000	0.18
51.0000	0.18
52.0000	0.18
53.0000	0.18

END

RESPONSE TEST DATA MW-B3 TEST #1

SE1000B
Environmental
Logger
05/04 16:58

Unit# 00446 Test# 5

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/04 15:35

Elapsed Time	Value
0.0000	2.47
0.0033	2.58
0.0066	2.58
0.0099	2.58
0.0133	2.58
0.0166	2.58
0.0200	2.58
0.0233	2.58
0.0266	2.58
0.0300	2.58
0.0333	2.57
0.0500	2.55
0.0666	2.54
0.0833	2.52
0.1000	2.50
0.1166	2.49
0.1333	2.47
0.1500	2.45
0.1666	2.43
0.1833	2.43
0.2000	2.41
0.2166	2.39
0.2333	2.38
0.2500	2.36
0.2666	2.34
0.2833	2.33
0.3000	2.31
0.3166	2.30
0.3333	2.28
0.4167	2.22
0.5000	1.96
0.5833	1.68
0.6667	1.49
0.7500	1.34
0.8333	1.22
0.9167	1.10
1.0000	1.00
1.0833	0.92
1.1667	0.84
1.2500	0.78
1.3333	0.73
1.4166	0.68
1.5000	0.63
1.5833	0.59
1.6667	0.56
1.7500	0.53
1.8333	0.50
1.9167	0.47
2.0000	0.44
2.5000	0.32
3.0000	0.19
3.5000	0.14
4.0000	0.10
4.5000	0.08
5.0000	0.06
5.5000	0.03
6.0000	0.02
6.5000	0.03
7.0000	0.01
7.5000	0.00
8.0000	0.00
8.5000	0.00
9.0000	0.00
9.5000	0.00
10.0000	0.00

END

RESPONSE TEST DATA MW-B3 TEST #2

SE1000B
Environmental
Logger
05/05 16:33

Unit# 00446 Test# 6

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 14:20

Elapsed Time	Value
0.0000	- 0.15
0.0033	3.11
0.0066	2.85
0.0099	2.82
0.0133	2.82
0.0166	2.82
0.0200	2.82
0.0233	2.81
0.0266	2.81
0.0300	2.81
0.0333	2.81
0.0500	2.80
0.0666	2.79
0.0833	2.77
0.1000	2.75
0.1166	2.74
0.1333	2.72
0.1500	2.71
0.1666	2.69
0.1833	2.67
0.2000	2.66
0.2166	2.64
0.2333	2.62
0.2500	2.62
0.2666	2.60
0.2833	2.59
0.3000	2.57
0.3166	2.56
0.3333	2.54
0.4167	2.47
0.5000	2.41
0.5833	2.34
0.6667	2.27
0.7500	2.21
0.8333	2.01
0.9167	1.75
1.0000	1.56
1.0833	1.41
1.1667	1.28
1.2500	1.16
1.3333	1.07
1.4166	0.97
1.5000	0.90
1.5833	0.83
1.6667	0.77
1.7500	0.72
1.8333	0.68
1.9167	0.63
2.0000	0.60
2.5000	0.44
3.0000	0.37
3.5000	0.26
4.0000	0.18
4.5000	0.14
5.0000	0.10
5.5000	0.08
6.0000	0.06
6.5000	0.05
7.0000	0.04
7.5000	0.03
8.0000	0.02
8.5000	0.02
9.0000	0.02
9.5000	0.01
10.0000	0.01
11.0000	0.01
12.0000	0.00
13.0000	0.00

END

RESPONSE TEST DATA
MW-B3 TEST #3

SE1000B
Environmental Logger
05/05 16:36

Unit# 00446 Test# 7

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 14:44

Elapsed Time	Value
0.0000	3.25
0.0033	2.41
0.0066	2.34
0.0099	2.28
0.0133	2.30
0.0166	2.30
0.0200	2.29
0.0233	2.29
0.0266	2.28
0.0300	2.29
0.0333	2.28
0.0500	2.26
0.0666	2.24
0.0833	2.24
0.1000	2.22
0.1166	2.20
0.1333	2.19
0.1500	2.16
0.1666	2.09
0.1833	2.03
0.2000	1.96
0.2166	1.89
0.2333	1.84
0.2500	1.79
0.2666	1.73
0.2833	1.68
0.3000	1.66
0.3166	1.61
0.3333	1.57
0.4167	1.40
0.5000	1.25
0.5833	1.13
0.6667	1.03
0.7500	0.93
0.8333	0.86
0.9167	0.80
1.0000	0.74
1.0833	0.69
1.1667	0.64
1.2500	0.60
1.3333	0.56
1.4166	0.53
1.5000	0.50
1.5833	0.47
1.6667	0.44
1.7500	0.42
1.8333	0.40
1.9167	0.37
2.0000	0.33
2.5000	0.18
3.0000	0.12
3.5000	0.08
4.0000	0.06
4.5000	0.05
5.0000	0.03
5.5000	0.02
6.0000	0.02
6.5000	0.04
7.0000	0.02
7.5000	0.01
8.0000	0.01
8.5000	0.01
9.0000	0.02
9.5000	0.03
10.0000	0.03
11.0000	0.01
12.0000	0.00
13.0000	0.00
14.0000	0.00

END

RESPONSE TEST DATA
MW-C1

SE1000B
Environmental Logger
05/04 16:10

Unit# 00446 Test# 0

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/04 10:59

Elapsed Time	Value
0.0000	3.45
0.0033	2.22
0.0066	1.45
0.0099	2.30
0.0133	1.84
0.0166	1.84
0.0200	1.94
0.0233	1.78
0.0266	1.83
0.0300	1.78
0.0333	1.75
0.0500	1.64
0.0666	1.52
0.0833	1.43
0.1000	1.33
0.1166	1.26
0.1333	1.17
0.1500	1.11
0.1666	1.03
0.1833	0.97
0.2000	0.91
0.2166	0.86
0.2333	0.80
0.2500	0.75
0.2666	0.72
0.2833	0.67
0.3000	0.63
0.3166	0.59
0.3333	0.56
0.4167	0.41
0.5000	0.31
0.5833	0.23
0.6667	0.18
0.7500	0.14
0.8333	0.11
0.9167	0.08
1.0000	0.06
1.0833	0.05
1.1667	0.04
1.2500	0.03
1.3333	0.02
1.4166	0.02
1.5000	0.01
1.5833	0.01
1.6667	0.01
1.7500	0.01
1.8333	0.00
1.9167	0.00
2.0000	0.00
2.5000	0.00
3.0000	0.00
3.5000	0.00
4.0000	0.00
4.5000	0.00
5.0000	0.00
5.5000	0.00
6.0000	0.00
6.5000	0.00
7.0000	0.00
7.5000	0.00
8.0000	0.00
8.5000	0.00
9.0000	0.00
9.5000	0.00
10.0000	- 0.00

END

RESPONSE TEST DATA
MW-C2

SE1000B
Environmental Logger
05/04 17:06

Unit# 00446 Test# 1

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/04 11:57

Elapsed Time	Value
0.0000	29.89
0.0033	23.67
0.0066	23.29
0.0099	23.41
0.0133	23.10
0.0166	23.08
0.0200	23.01
0.0233	22.94
0.0266	22.91
0.0300	22.83
0.0333	22.81
0.0500	22.62
0.0666	22.46
0.0833	22.25
0.1000	22.12
0.1166	21.98
0.1333	21.86
0.1500	21.72
0.1666	21.60
0.1833	21.47
0.2000	21.36
0.2166	21.23
0.2333	21.13
0.2500	21.01
0.2666	20.90
0.2833	20.79
0.3000	20.68
0.3166	20.59
0.3333	20.48
0.4167	19.96
0.5000	19.48
0.5833	19.02
0.6667	18.58
0.7500	18.16
0.8333	17.75
0.9167	17.34
1.0000	16.96
1.0833	16.58
1.1667	16.21
1.2500	15.85
1.3333	15.50
1.4166	15.17
1.5000	14.83
1.5833	14.51
1.6667	14.20
1.7500	13.89
1.8333	13.60
1.9167	13.30
2.0000	12.97
2.5000	11.41
3.0000	10.02
3.5000	8.79
4.0000	7.67
4.5000	6.70
5.0000	5.87
5.5000	5.16
6.0000	4.55
6.5000	4.02
7.0000	3.56
7.5000	3.15
8.0000	2.80
8.5000	2.50
9.0000	2.24
9.5000	2.03
10.0000	1.83
11.0000	1.49
12.0000	1.25
13.0000	1.06
14.0000	0.90
15.0000	0.78
16.0000	0.71
17.0000	0.63
18.0000	0.56
19.0000	0.51
20.0000	0.46
21.0000	0.42
22.0000	0.39
23.0000	0.36
24.0000	0.34
25.0000	0.32
26.0000	0.31
27.0000	0.29
28.0000	0.27
29.0000	0.25
30.0000	0.24
31.0000	0.23
32.0000	0.22
33.0000	0.21
34.0000	0.21
35.0000	0.20
36.0000	0.19
37.0000	0.19
38.0000	0.18
39.0000	0.18
40.0000	0.18

END

RESPONSE TEST DATA MW-E1 TEST #1

SE1000B
Environmental
Logger
05/04 09:11

Unit# 00446 Test# 4

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 10:45

Elapsed Time	Value
0.0000	3.07
0.0033	3.64
0.0066	2.31
0.0099	0.78
0.0133	1.02
0.0166	2.19
0.0200	2.73
0.0233	2.09
0.0266	1.31
0.0300	1.32
0.0333	1.92
0.0500	1.76
0.0666	1.69
0.0833	1.67
0.1000	1.65
0.1166	1.64
0.1333	1.62
0.1500	1.60
0.1666	1.58
0.1833	1.56
0.2000	1.55
0.2166	1.53
0.2333	1.51
0.2500	1.49
0.2666	1.48
0.2833	1.46
0.3000	1.45
0.3166	1.43
0.3333	1.41
0.4167	1.33
0.5000	1.27
0.5833	1.20
0.6667	1.14
0.7500	1.09
0.8333	1.03
0.9167	0.98
1.0000	0.93
1.0833	0.90
1.1667	0.85
1.2500	0.82
1.3333	0.78
1.4166	0.74
1.5000	0.71
1.5833	0.68
1.6667	0.65
1.7500	0.62
1.8333	0.59
1.9167	0.56
2.0000	0.55
2.5000	0.42
3.0000	0.32
3.5000	0.25
4.0000	0.20
4.5000	0.16

END

RESPONSE TEST DATA MW-E1 TEST #2

SE1000B
Environmental
Logger
05/04 09:13

Unit# 00446 Test# 5

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 11:03

Elapsed Time	Value
0.0000	0.01
0.0033	0.10
0.0066	2.95
0.0099	3.96
0.0133	2.67
0.0166	0.93
0.0200	0.98
0.0233	2.22
0.0266	2.89
0.0300	2.28
0.0333	1.42
0.0500	1.67
0.0666	1.75
0.0833	1.77
0.1000	1.76
0.1166	1.74
0.1333	1.71
0.1500	1.69
0.1666	1.67
0.1833	1.65
0.2000	1.63
0.2166	1.61
0.2333	1.59
0.2500	1.57
0.2666	1.55
0.2833	1.53
0.3000	1.52
0.3166	1.50
0.3333	1.49
0.4167	1.41
0.5000	1.34
0.5833	1.28
0.6667	1.22
0.7500	1.16
0.8333	1.11
0.9167	1.06
1.0000	1.01
1.0833	0.96
1.1667	0.93
1.2500	0.88
1.3333	0.84
1.4166	0.80
1.5000	0.77
1.5833	0.74
1.6667	0.71
1.7500	0.68
1.8333	0.65
1.9167	0.62
2.0000	0.59
2.5000	0.46
3.0000	0.36
3.5000	0.28
4.0000	0.21
4.5000	0.17
5.0000	0.13
5.5000	0.09
6.0000	0.07
6.5000	0.05
7.0000	0.04
7.5000	0.04
8.0000	0.03
8.5000	0.02
9.0000	0.00
9.5000	0.00
10.0000	0.00
11.0000	0.00
12.0000	- 0.00

END

RESPONSE TEST DATA
MW-E2

SE1000B
Environmental Logger
05/05 16:30

Unit# 00446 Test# 5

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 13:18

Elapsed Time	Value
0.0000	3.62
0.0033	24.97
0.0066	23.52
0.0099	21.99
0.0133	21.96
0.0166	21.69
0.0200	21.38
0.0233	21.15
0.0266	21.02
0.0300	20.86
0.0333	20.69
0.0500	19.93
0.0666	19.25
0.0833	18.59
0.1000	17.92
0.1166	17.37
0.1333	16.78
0.1500	16.21
0.1666	15.73
0.1833	15.18
0.2000	14.64
0.2166	14.20
0.2333	13.71
0.2500	13.28
0.2666	12.79
0.2833	12.37
0.3000	11.96
0.3166	11.55
0.3333	11.16
0.4167	9.34
0.5000	7.72
0.5833	6.39
0.6667	5.27
0.7500	4.32
0.8333	3.56
0.9167	2.94
1.0000	2.44
1.0833	2.06
1.1667	1.76
1.2500	1.53
1.3333	1.35
1.4166	1.22
1.5000	1.11
1.5833	1.02
1.6667	0.94
1.7500	0.89
1.8333	0.84
1.9167	0.79
2.0000	0.76
2.5000	0.59
3.0000	0.50
3.5000	0.43
4.0000	0.37
4.5000	0.33
5.0000	0.30
5.5000	0.27
6.0000	0.24
6.5000	0.22
7.0000	0.20
7.5000	0.18
8.0000	0.18
8.5000	0.16
9.0000	0.15
9.5000	0.14
10.0000	0.13
11.0000	0.12
12.0000	0.10
13.0000	0.08
14.0000	0.08
15.0000	0.07
16.0000	0.06
17.0000	0.06
18.0000	0.05
19.0000	0.05
20.0000	0.05
21.0000	0.04
22.0000	0.03
23.0000	0.03
24.0000	0.03
25.0000	0.02
26.0000	0.01
27.0000	0.01
28.0000	0.02
29.0000	0.01
30.0000	0.01
31.0000	0.01

END

RESPONSE TEST DATA
ME-F1

SE1000B
Environmental Logger
05/05 16:18

Unit# 00446 Test# 2

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 10:58

Elapsed Time	Value
0.0000	0.17
0.0033	5.60
0.0066	2.90
0.0099	3.20
0.0133	3.04
0.0166	2.99
0.0200	2.92
0.0233	2.85
0.0266	2.80
0.0300	2.75
0.0333	2.69
0.0500	2.48
0.0666	2.29
0.0833	2.14
0.1000	2.00
0.1166	1.87
0.1333	1.74
0.1500	1.64
0.1666	1.53
0.1833	1.44
0.2000	1.35
0.2166	1.28
0.2333	1.20
0.2500	1.13
0.2666	1.07
0.2833	1.01
0.3000	0.95
0.3166	0.91
0.3333	0.85
0.4167	0.65
0.5000	0.51
0.5833	0.39
0.6667	0.31
0.7500	0.25
0.8333	0.20
0.9167	0.18
1.0000	0.14
1.0833	0.12
1.1667	0.10
1.2500	0.09
1.3333	0.08
1.4166	0.07
1.5000	0.06
1.5833	0.06
1.6667	0.05
1.7500	0.05
1.8333	0.04
1.9167	0.04
2.0000	0.04
2.5000	0.03
3.0000	0.02
3.5000	0.02
4.0000	0.01
4.5000	0.01
5.0000	0.01
5.5000	0.01
6.0000	0.00
6.5000	0.00
7.0000	0.01
7.5000	0.01
8.0000	0.01
8.5000	0.01
9.0000	0.01
9.5000	0.01
10.0000	0.01
11.0000	0.01
12.0000	0.01

END

RESPONSE TEST DATA
MW-F2

SE1000B
Environmental Logger
05/05 16:10

Unit# 00446 Test# 0

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 09:54

Elapsed Time	Value
0.0000	29.87
0.0033	23.57
0.0066	23.53
0.0099	23.27
0.0133	22.98
0.0166	22.89
0.0200	22.84
0.0233	22.69
0.0266	22.57
0.0300	22.48
0.0333	22.39
0.0500	21.93
0.0666	21.51
0.0833	21.11
0.1000	20.71
0.1166	20.34
0.1333	19.95
0.1500	19.58
0.1666	19.20
0.1833	18.86
0.2000	18.50
0.2166	18.17
0.2333	17.81
0.2500	17.43
0.2666	17.08
0.2833	16.76
0.3000	16.44
0.3166	16.11
0.3333	15.82
0.4167	14.30
0.5000	12.91
0.5833	11.63
0.6667	10.46
0.7500	9.39
0.8333	8.43
0.9167	7.49
1.0000	6.70
1.0833	5.99
1.1667	5.34
1.2500	4.76
1.3333	4.24
1.4166	3.78
1.5000	3.37
1.5833	3.06
1.6667	2.71
1.7500	2.42
1.8333	2.15
1.9167	1.92
2.0000	1.72
2.5000	0.97
3.0000	0.62
3.5000	0.44
4.0000	0.34
4.5000	0.28
5.0000	0.23
5.5000	0.20
6.0000	0.18
6.5000	0.17
7.0000	0.15
7.5000	0.14
8.0000	0.13
8.5000	0.12
9.0000	0.11
9.5000	0.10
10.0000	0.10
11.0000	0.09
12.0000	0.08
13.0000	0.08
14.0000	0.07
15.0000	0.06
16.0000	0.06
17.0000	0.06
18.0000	0.05
19.0000	0.05
20.0000	0.06
21.0000	0.05

END

RESPONSE TEST DATA
MW-F3

SE1000B
Environmental Logger
05/05 16:13

Unit# 00446 Test# 1

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 10:28

Elapsed Time	Value
0.0000	2.88
0.0033	4.84
0.0066	2.35
0.0099	1.91
0.0133	2.36
0.0166	2.25
0.0200	2.06
0.0233	2.03
0.0266	1.97
0.0300	1.89
0.0333	1.84
0.0500	1.59
0.0666	1.40
0.0833	1.24
0.1000	1.11
0.1166	0.99
0.1333	0.89
0.1500	0.80
0.1666	0.73
0.1833	0.66
0.2000	0.60
0.2166	0.55
0.2333	0.50
0.2500	0.46
0.2666	0.42
0.2833	0.39
0.3000	0.37
0.3166	0.33
0.3333	0.31
0.4167	0.21
0.5000	0.16
0.5833	0.12
0.6667	0.10
0.7500	0.08
0.8333	0.06
0.9167	0.05
1.0000	0.04
1.0833	0.04
1.1667	0.03
1.2500	0.03
1.3333	0.03
1.4166	0.02
1.5000	0.02
1.5833	0.02
1.6667	0.02
1.7500	0.02
1.8333	0.02
1.9167	0.02
2.0000	0.02
2.5000	0.01
3.0000	0.01
3.5000	0.01
4.0000	0.00
4.5000	0.01
5.0000	0.01
5.5000	0.01
6.0000	0.01
6.5000	0.01
7.0000	0.01
7.5000	0.01
8.0000	0.01
8.5000	0.01
9.0000	0.01
9.5000	0.01

END

RESPONSE TEST DATA
MW-F4

SE1000B
Environmental Logger
05/05 16:22

Unit# 00446 Test# 3

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 11:29

Elapsed Time	Value
0.0000	3.72
0.0033	4.10
0.0066	3.29
0.0099	3.18
0.0133	3.06
0.0166	2.96
0.0200	2.86
0.0233	2.78
0.0266	2.68
0.0300	2.61
0.0333	2.53
0.0500	2.22
0.0666	1.96
0.0833	1.74
0.1000	1.56
0.1166	1.41
0.1333	1.27
0.1500	1.15
0.1666	1.05
0.1833	0.95
0.2000	0.87
0.2166	0.80
0.2333	0.74
0.2500	0.68
0.2666	0.62
0.2833	0.57
0.3000	0.54
0.3166	0.49
0.3333	0.45
0.4167	0.33
0.5000	0.24
0.5833	0.18
0.6667	0.15
0.7500	0.12
0.8333	0.10
0.9167	0.09
1.0000	0.08
1.0833	0.07
1.1667	0.06
1.2500	0.05
1.3333	0.05
1.4166	0.04
1.5000	0.04
1.5833	0.04
1.6667	0.03
1.7500	0.03
1.8333	0.03
1.9167	0.03
2.0000	0.02
2.5000	0.01
3.0000	0.01
3.5000	0.01
4.0000	0.01
4.5000	0.01
5.0000	0.01
5.5000	0.01
6.0000	0.01
6.5000	0.01
7.0000	0.01
7.5000	0.01
8.0000	0.01
8.5000	0.01
9.0000	0.01
9.5000	0.01
10.0000	0.01
11.0000	0.00
12.0000	0.00

END

RESPONSE TEST DATA MW-G1 TEST #1

SE1000B
Environmental
Logger
05/06 11:47

Unit# 00446 Test# 6

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/06 08:57

Elapsed Time	Value
0.0000	0.24
0.0033	2.06
0.0066	4.96
0.0099	2.28
0.0133	2.68
0.0166	3.02
0.0200	2.60
0.0233	2.74
0.0266	2.71
0.0300	2.65
0.0333	2.66
0.0500	2.58
0.0666	2.53
0.0833	2.47
0.1000	2.43
0.1166	2.39
0.1333	2.35
0.1500	2.31
0.1666	2.27
0.1833	2.24
0.2000	2.21
0.2166	2.17
0.2333	2.14
0.2500	2.11
0.2666	2.07
0.2833	2.05
0.3000	2.02
0.3166	1.99
0.3333	1.97
0.4167	1.83
0.5000	1.71
0.5833	1.60
0.6667	1.49
0.7500	1.41
0.8333	1.31
0.9167	1.24
1.0000	1.16
1.0833	1.09
1.1667	1.03
1.2500	0.96
1.3333	0.92
1.4166	0.86
1.5000	0.81
1.5833	0.76
1.6667	0.73
1.7500	0.69
1.8333	0.65
1.9167	0.61
2.0000	0.58
2.5000	0.42
3.0000	0.32
3.5000	0.24
4.0000	0.18
4.5000	0.14
5.0000	0.12
5.5000	0.10
6.0000	0.08
6.5000	0.07
7.0000	0.06
7.5000	0.06
8.0000	0.05
8.5000	0.04
9.0000	0.04
9.5000	0.04
10.0000	0.04
11.0000	0.04
12.0000	0.04
13.0000	0.04
14.0000	0.03
15.0000	0.03

END

RESPONSE TEST DATA MW-G1 TEST #2

SE1000B
Environmental
Logger
05/06 11:51

Unit# 00446 Test# 7

INPUT 1: Level (F)
TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/06 09:26

Elapsed Time	Value
0.0000	5.88
0.0033	6.14
0.0066	2.92
0.0099	5.20
0.0133	3.70
0.0166	4.35
0.0200	4.01
0.0233	4.06
0.0266	4.03
0.0300	3.97
0.0333	3.97
0.0500	3.86
0.0666	3.77
0.0833	3.70
0.1000	3.63
0.1166	3.56
0.1333	3.52
0.1500	3.46
0.1666	3.40
0.1833	3.36
0.2000	3.31
0.2166	3.26
0.2333	3.22
0.2500	3.18
0.2666	3.14
0.2833	3.10
0.3000	3.05
0.3166	3.01
0.3333	2.98
0.4167	2.79
0.5000	2.62
0.5833	2.46
0.6667	2.32
0.7500	2.19
0.8333	2.06
0.9167	1.94
1.0000	1.83
1.0833	1.73
1.1667	1.64
1.2500	1.54
1.3333	1.47
1.4166	1.38
1.5000	1.31
1.5833	1.24
1.6667	1.17
1.7500	1.11
1.8333	1.05
1.9167	1.00
2.0000	0.94
2.5000	0.69
3.0000	0.51
3.5000	0.38
4.0000	0.29
4.5000	0.22
5.0000	0.18
5.5000	0.14
6.0000	0.11
6.5000	0.09
7.0000	0.07
7.5000	0.07
8.0000	0.06
8.5000	0.05
9.0000	0.04
9.5000	0.04
10.0000	0.03
11.0000	0.03
12.0000	0.02
13.0000	0.02

END

RESPONSE TEST DATA
MW-G3

SE1000B
Environmental Logger
05/06 11:59

Unit# 00446 Test# 8

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/06 10:12

Elapsed Time	Value
0.0000	- 0.14
0.0033	3.75
0.0066	8.74
0.0099	5.95
0.0133	1.87
0.0166	2.69
0.0200	5.34
0.0233	5.27
0.0266	3.31
0.0300	2.86
0.0333	3.99
0.0500	3.89
0.0666	3.57
0.0833	3.37
0.1000	3.27
0.1166	3.22
0.1333	3.18
0.1500	3.14
0.1666	3.09
0.1833	3.06
0.2000	3.01
0.2166	2.99
0.2333	2.95
0.2500	2.92
0.2666	2.88
0.2833	2.85
0.3000	2.82
0.3166	2.80
0.3333	2.77
0.4167	2.63
0.5000	2.51
0.5833	2.40
0.6667	2.29
0.7500	2.20
0.8333	2.10
0.9167	2.01
1.0000	1.92
1.0833	1.85
1.1667	1.77
1.2500	1.70
1.3333	1.63
1.4166	1.57
1.5000	1.50
1.5833	1.45
1.6667	1.39
1.7500	1.33
1.8333	1.29
1.9167	1.24
2.0000	1.19
2.5000	0.95
3.0000	0.77
3.5000	0.63
4.0000	0.53
4.5000	0.43
5.0000	0.37
5.5000	0.31
6.0000	0.26
6.5000	0.22
7.0000	0.19
7.5000	0.17
8.0000	0.15
8.5000	0.13
9.0000	0.11
9.5000	0.10
10.0000	0.09
11.0000	0.07
12.0000	0.06
13.0000	0.05
14.0000	0.04
15.0000	0.04
16.0000	0.03
17.0000	0.03
18.0000	0.03

END

RESPONSE TEST DATA
MW-G4

SE1000B
Environmental Logger
05/05 16:27

Unit# 00446 Test# 4

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/05 12:17

Elapsed Time	Value
0.0000	7.98
0.0033	7.65
0.0066	4.32
0.0099	6.75
0.0133	5.16
0.0166	5.91
0.0200	5.43
0.0233	5.62
0.0266	5.48
0.0300	5.50
0.0333	5.44
0.0500	5.32
0.0666	5.22
0.0833	5.12
0.1000	5.05
0.1166	4.97
0.1333	4.89
0.1500	4.83
0.1666	4.76
0.1833	4.70
0.2000	4.65
0.2166	4.59
0.2333	4.53
0.2500	4.48
0.2666	4.42
0.2833	4.37
0.3000	4.31
0.3166	4.26
0.3333	4.21
0.4167	3.97
0.5000	3.74
0.5833	3.55
0.6667	3.35
0.7500	3.17
0.8333	2.99
0.9167	2.82
1.0000	2.67
1.0833	2.52
1.1667	2.38
1.2500	2.24
1.3333	2.12
1.4166	2.01
1.5000	1.89
1.5833	1.79
1.6667	1.68
1.7500	1.59
1.8333	1.50
1.9167	1.42
2.0000	1.34
2.5000	0.93
3.0000	0.65
3.5000	0.45
4.0000	0.31
4.5000	0.22
5.0000	0.16
5.5000	0.12
6.0000	0.08
6.5000	0.06
7.0000	0.05
7.5000	0.04
8.0000	0.03
8.5000	0.02
9.0000	0.01
9.5000	0.01
10.0000	0.01
11.0000	0.01
12.0000	0.01
13.0000	0.01
14.0000	0.01
15.0000	0.00
16.0000	0.00
17.0000	0.00
18.0000	0.00
19.0000	0.00
20.0000	0.00
21.0000	0.00
22.0000	0.00

END

RESPONSE TEST DATA
MW-J1

SE1000B
Environmental Logger
05/04 08:59

Unit# 00446 Test# 3

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 10:05

Elapsed Time	Value
0.0000	4.22
0.0033	2.15
0.0066	2.49
0.0099	3.28
0.0133	2.79
0.0166	2.55
0.0200	2.80
0.0233	2.74
0.0266	2.61
0.0300	2.63
0.0333	2.62
0.0500	2.48
0.0666	2.37
0.0833	2.26
0.1000	2.17
0.1166	2.07
0.1333	1.99
0.1500	1.90
0.1666	1.83
0.1833	1.75
0.2000	1.68
0.2166	1.61
0.2333	1.55
0.2500	1.49
0.2666	1.43
0.2833	1.37
0.3000	1.31
0.3166	1.27
0.3333	1.22
0.4167	1.00
0.5000	0.83
0.5833	0.69
0.6667	0.57
0.7500	0.48
0.8333	0.40
0.9167	0.34
1.0000	0.29
1.0833	0.25
1.1667	0.21
1.2500	0.18
1.3333	0.17
1.4166	0.15
1.5000	0.13
1.5833	0.11
1.6667	0.10
1.7500	0.09
1.8333	0.08
1.9167	0.07
2.0000	0.07
2.5000	0.04
3.0000	0.03
3.5000	0.03
4.0000	0.02
4.5000	0.02
5.0000	0.02
5.5000	0.02
6.0000	0.02
6.5000	0.02
7.0000	0.02
7.5000	0.02
8.0000	0.02
8.5000	0.02
9.0000	0.02
9.5000	0.02
10.0000	0.02
11.0000	0.02
12.0000	0.02
13.0000	0.02
14.0000	0.02

END

RESPONSE TEST DATA
MW-J2

SE1000B
Environmental Logger
05/04 08:57

Unit# 00446 Test# 2

INPUT 1: Level (F) TOC

Reference	31.82
Scale factor	30.03
Offset	- 0.02

Step# 0 05/03 09:19

Elapsed Time	Value
0.0000	54.36
0.0033	53.11
0.0066	53.37
0.0099	53.24
0.0133	52.82
0.0166	52.84
0.0200	52.84
0.0233	52.75
0.0266	52.62
0.0300	52.59
0.0333	52.56
0.0500	52.24
0.0666	51.96
0.0833	51.65
0.1000	51.34
0.1166	51.06
0.1333	50.87
0.1500	50.57
0.1666	50.27
0.1833	50.01
0.2000	49.78
0.2166	49.52
0.2333	49.25
0.2500	49.05
0.2666	48.75
0.2833	48.56
0.3000	48.31
0.3166	48.09
0.3333	47.82
0.4167	46.75
0.5000	45.69
0.5833	44.72
0.6667	43.79
0.7500	42.93
0.8333	42.13
0.9167	41.40
1.0000	40.68
1.0833	40.04
1.1667	39.46
1.2500	38.94
1.3333	38.44
1.4166	38.00
1.5000	37.58
1.5833	37.20
1.6667	36.85
1.7500	36.52
1.8333	36.23
1.9167	35.95
2.0000	35.70
2.5000	34.54
3.0000	33.84
3.5000	33.40
4.0000	33.14
4.5000	32.99
5.0000	32.89
5.5000	32.81
6.0000	32.75
6.5000	32.71
7.0000	32.68
7.5000	32.65
8.0000	32.63
8.5000	32.61
9.0000	32.59
9.5000	32.58
10.0000	32.57
11.0000	32.56
12.0000	32.54
13.0000	32.53
14.0000	32.52
15.0000	32.52
16.0000	32.50
17.0000	32.50
18.0000	32.49
19.0000	32.49
20.0000	32.49

END

APPENDIX M

APPENDIX M

AQUIFER RESPONSE TEST DATA, PHASE II

APPENDIX K

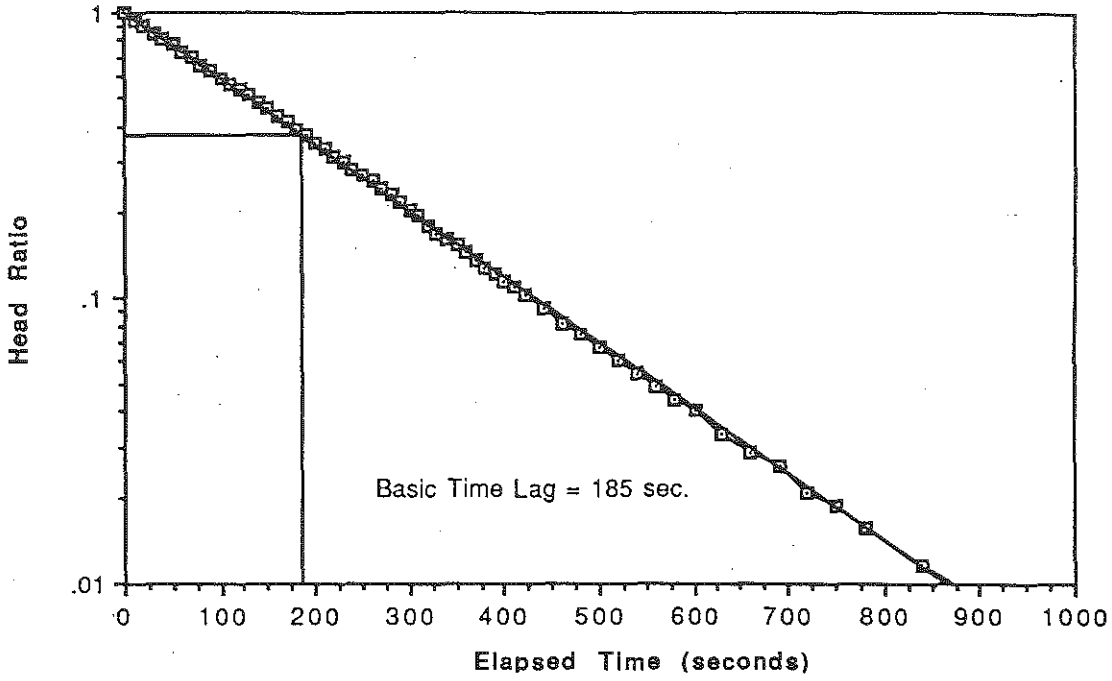
AQUIFER RESPONSE TEST DATA, PHASE II

BOUWER AND RICE (1976) SLUG TEST CALCULATIONS
STANLEY TOOLS, FOWLERVILLE, MICHIGAN

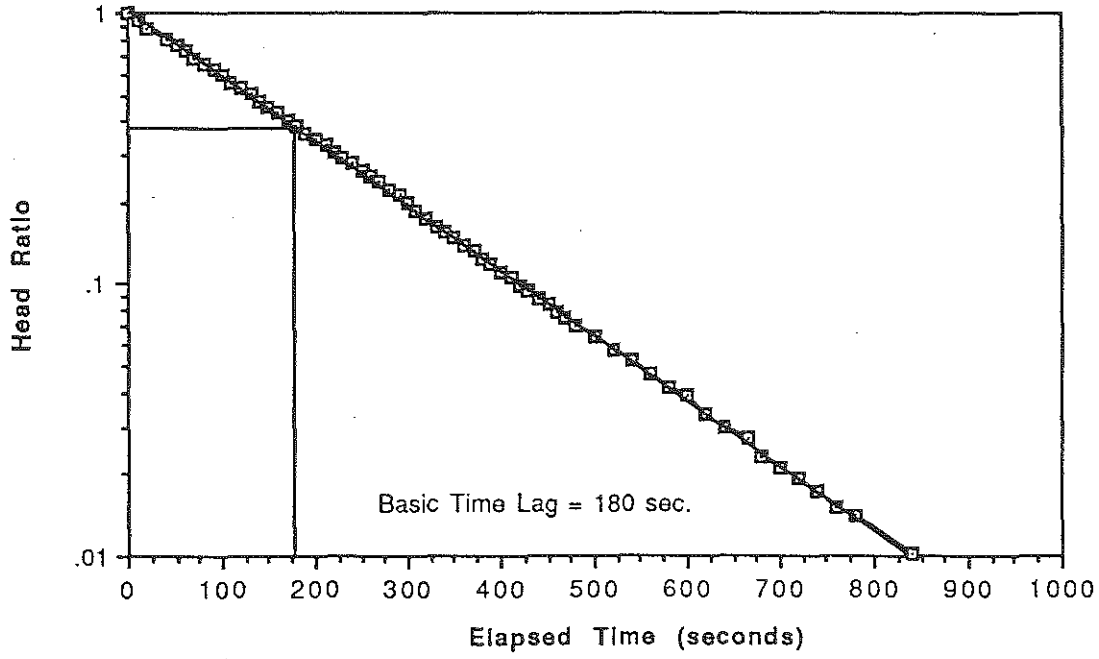
	MW-B4/1	MW-B4/2	MW-E3/1	MW-E3/2	MW-F5/1	MW-F5/2	MW-J3/1	MW-J3/2	MW-L1/1	MW-L1/2	MW-BCK3/1	MW-BCK3/1
r-c (ft)	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833
r-w (ft)	NA	NA	0.3333	0.3333	NA	NA	NA	NA	0.3333	0.3333	NA	NA
r-s (ft)	0.0833	0.0833	NA	NA	0.0833	0.0833	0.0833	0.0833	NA	NA	0.0833	0.0833
Lw (ft)	20.76	20.76	1.7	1.7	20.39	20.4	20.4	20.4	7.3	7.3	22.3	22.3
H (ft)	1.6	1.6	1.7	1.7	3	3	1.8	1.8	7.3	7.3	3.5	3.5
C	NA	NA	0.8	0.8	NA	NA	NA	NA	1.7	1.7	NA	NA
Le (ft)	5	5	10	10	5	5	5	5	10	10	5	5
Le' (ft)	1.6	1.6	1.7	1.7	3	3	1.8	1.8	7.3	7.3	3.5	3.5
Le'/r-w	NA	NA	5.1005	5.1005	NA	NA	NA	NA	21.9022	21.9022	NA	NA
ln(Re/r-w):	NA	NA	1.2020	1.2020	NA	NA	NA	NA	2.3042	2.3042	NA	NA
yo	NA	NA	5.6	6	NA	NA	NA	NA	0.87	0.79	0	0
yt	NA	NA	1	1	NA	NA	NA	NA	0.29	0.29	NA	NA
t(sec)	NA	NA	158	170	NA	NA	NA	NA	90	76	NA	NA
T(sec)	2500	2450	NA	NA	405	355	580	600	NA	NA	185	180
Head Ratio at t-0	100	100	NA	NA	100	100	100	100	NA	NA	100	100
Head Ratio at T	37	37	NA	NA	37	37	37	37	NA	NA	37	37
Kh/Kv Ratio	1	1	NA	NA	1	1	1	1	NA	NA	1	1
ln(yo/yt)/t	NA	NA	0.0109	0.0105	NA	NA	NA	NA	0.0122	0.0132	NA	NA
K (ft/day)	**0.2734**	**0.2790**	**2.3109**	**2.2338**	**1.0552**	**1.2038**	**1.0814**	**1.0453**	**1.1550**	**1.2476**	**2.0514**	**2.1084**

C = Coefficient based upon well and borehole diameter and screen length (Le'); derived from Bouwer and Rice (1976) for calculation of ln(Re/r-w).
Le' = Screen length that intersects water-bearing zone.

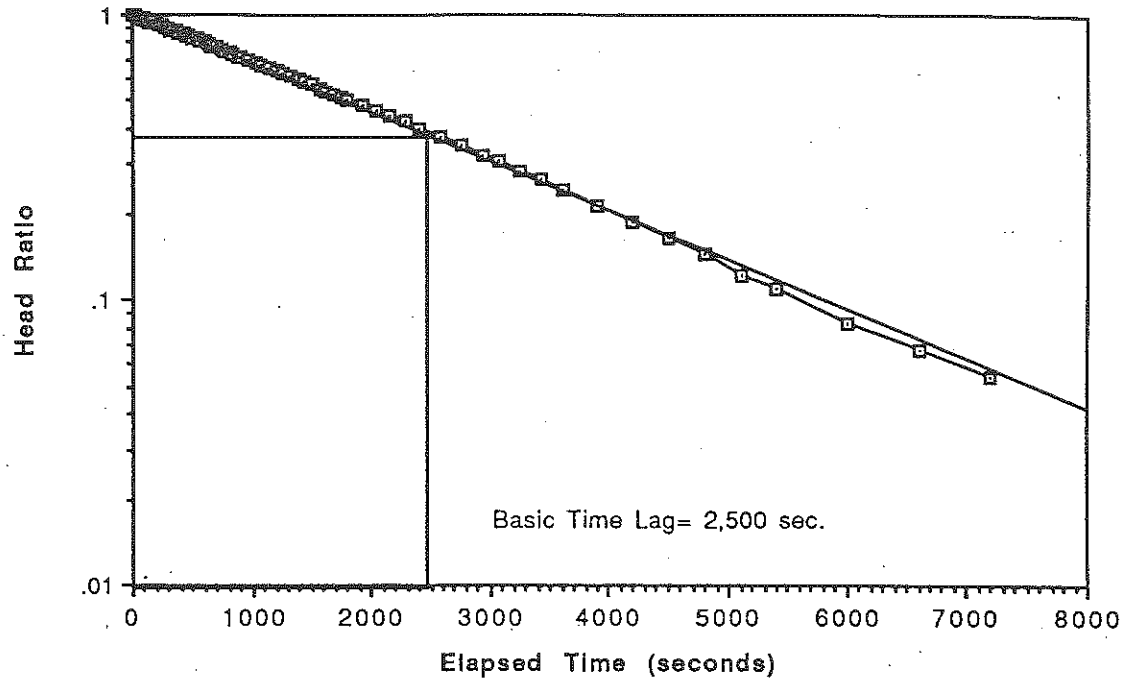
MW-BCK 3 Response Test #1
Head Ratio vs. Time



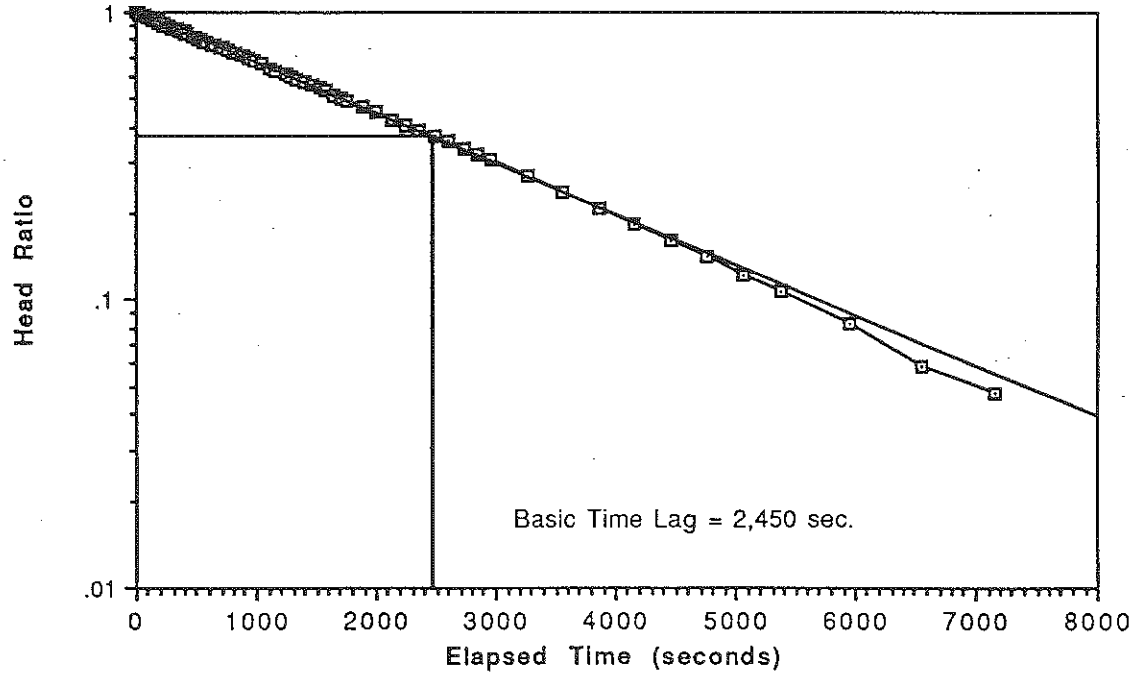
MW-BCK 3 Response Test #2
Head Ratio vs. Time



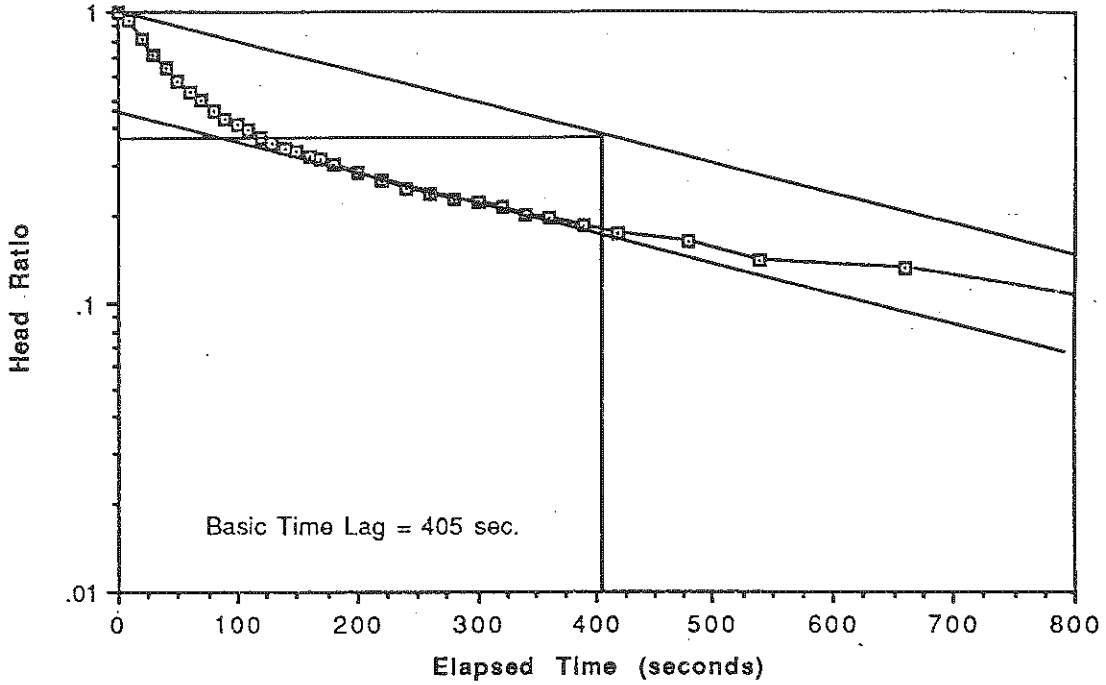
MW-B4 Response Test #1
Head Ratio vs. Time



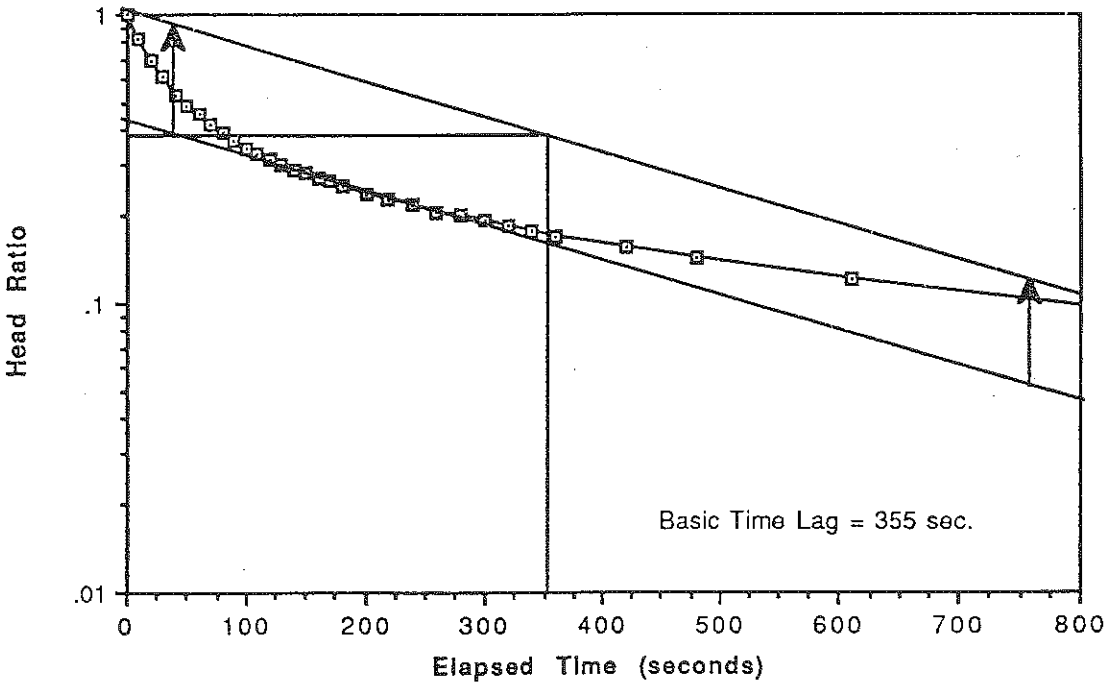
MW-B4 Response Test #2
Head Ratio vs. Time



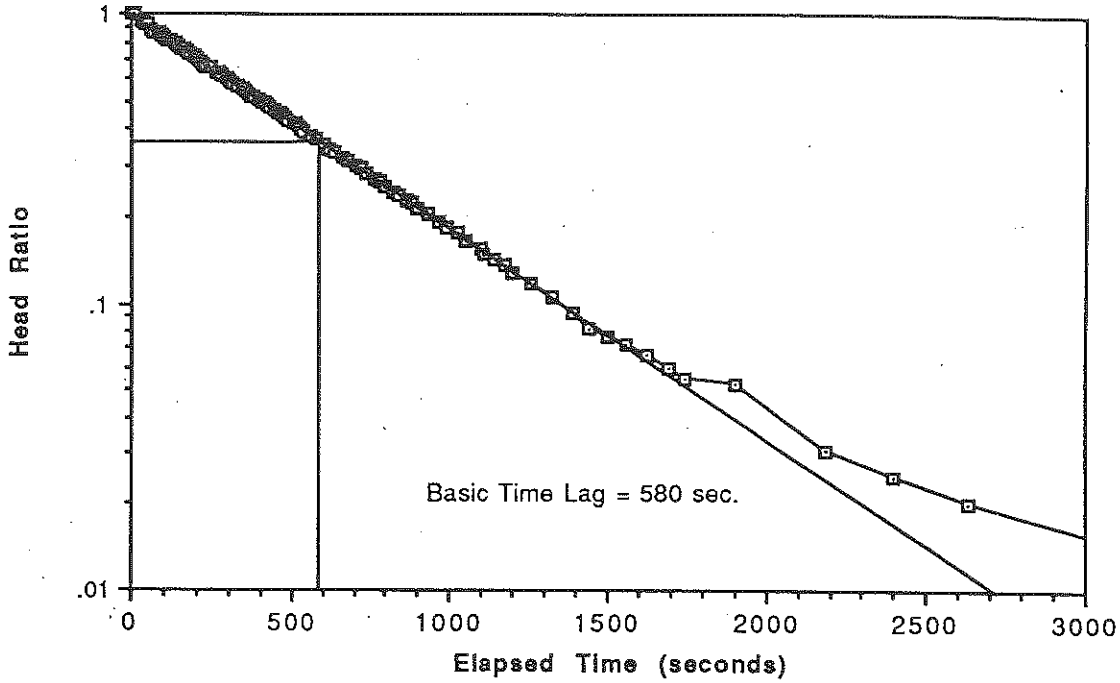
MW-F5 Reponse Test #1
Head Ratio vs. Time



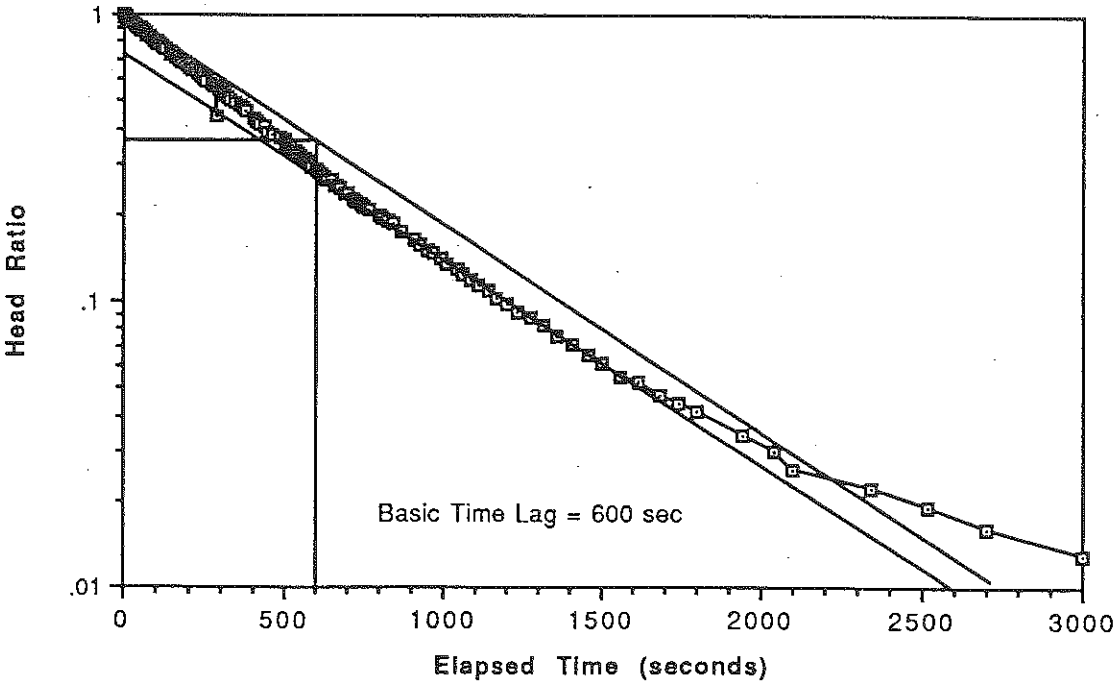
MW-F5 Response Test #2
Head Ratio vs. Time



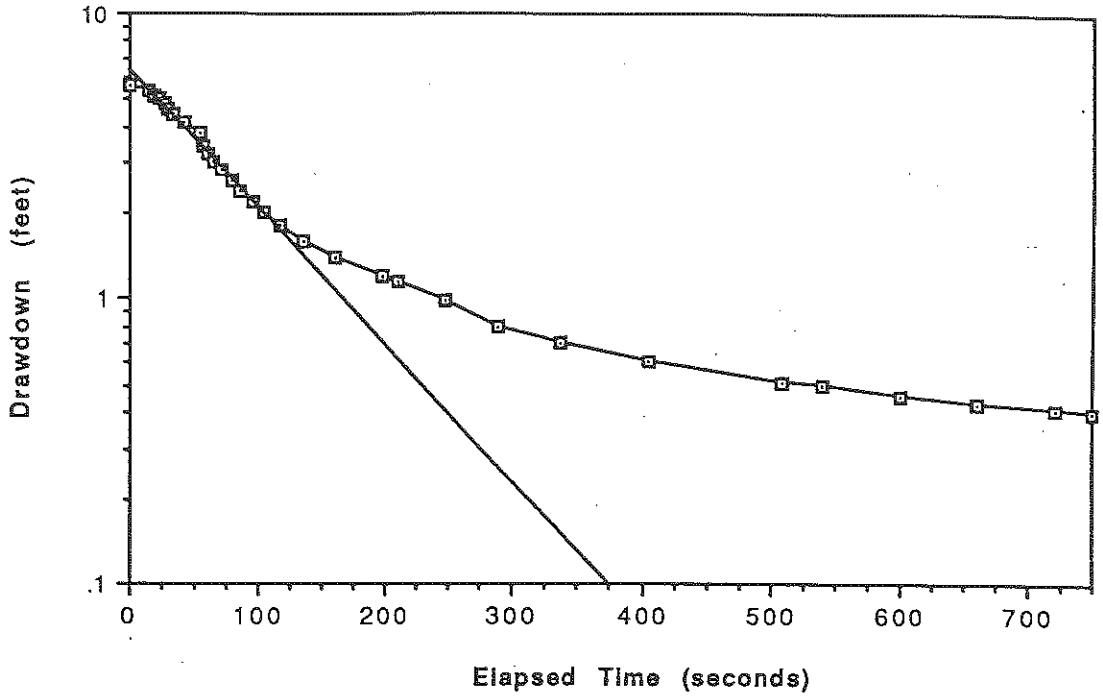
MW-J3 Response Test #1
Head Ratio vs. Time



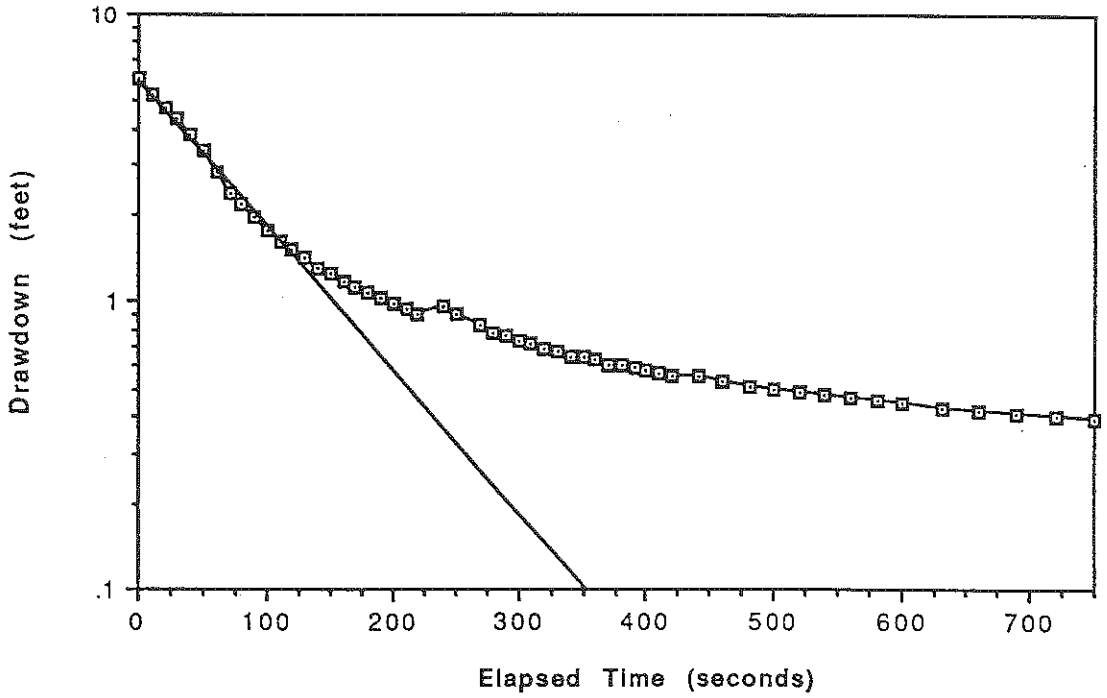
MW-J3 Response Test #2
Head Ratio vs. Time



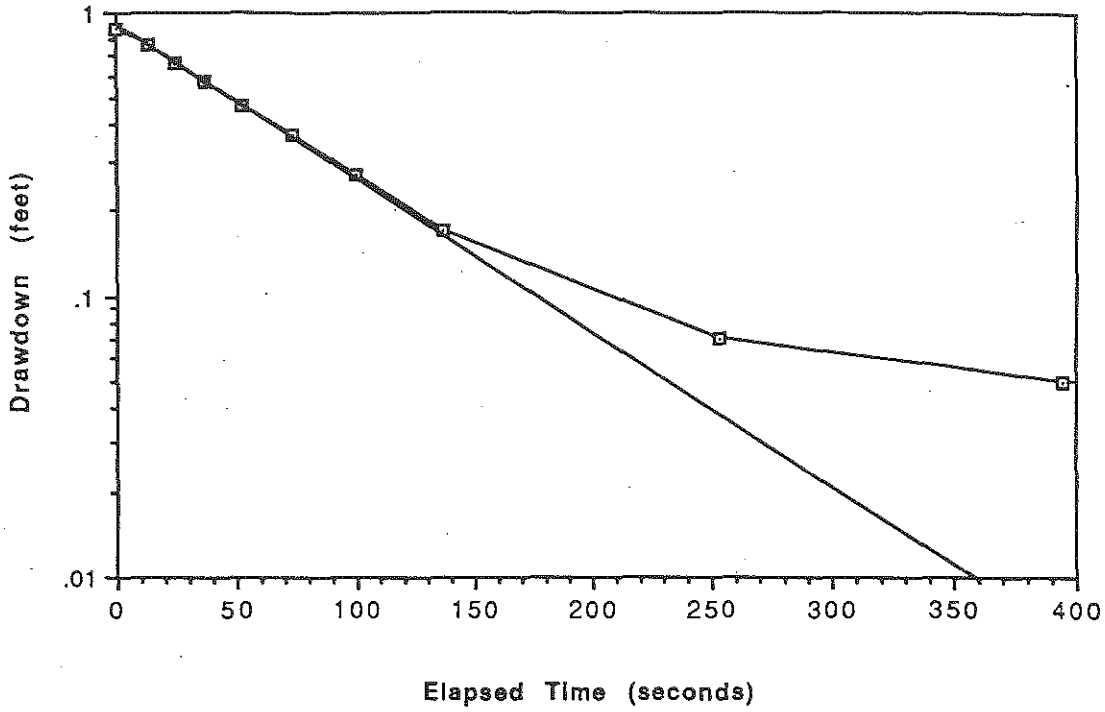
MW-E3 Response Test #1
Drawdown vs. Time



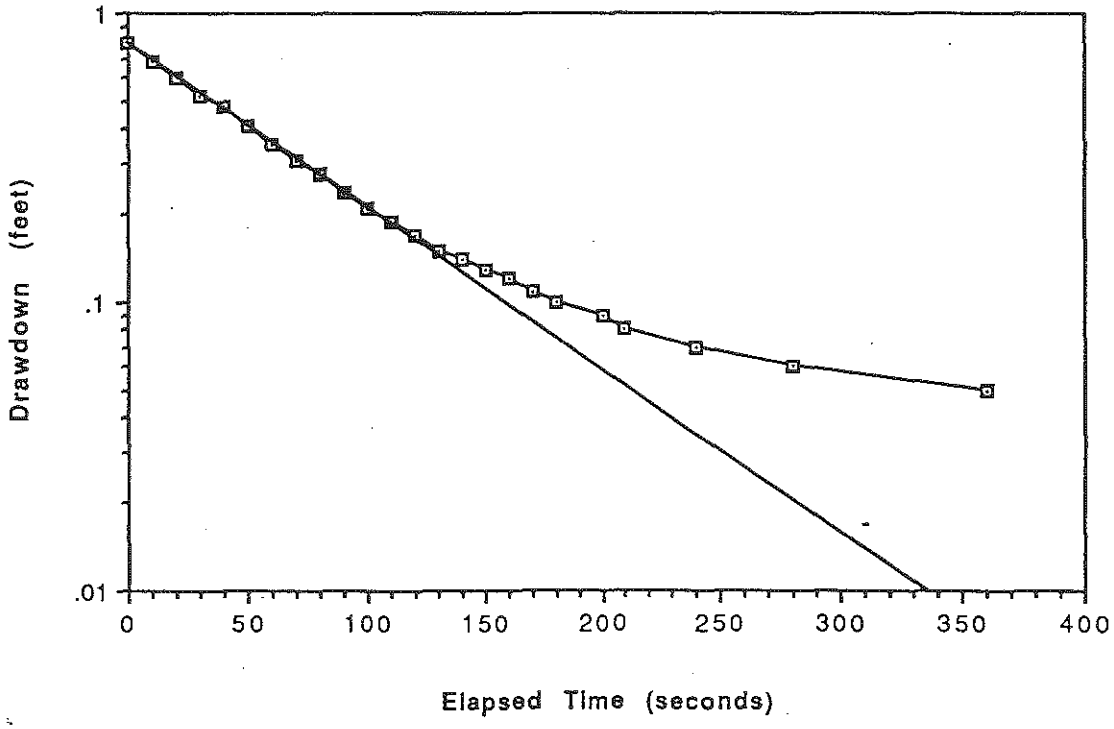
MW-E3 Response Test #2
Drawdown vs. Time



MW-L1 Response Test #1
Drawdown vs. Time



MW-L1 Response Test #2
Drawdown vs. Time



APPENDIX N

APPENDIX N

WELL LOGS ON FILE WITH MDNR

APPENDIX L

WELL LOGS ON FILE WITH MDNR

Nonresponsive

HANDY TOWNSHIP

LIVINGSTON COUNTY, MICHIGAN.

Fowlerville Village and
Sections Nonresponsive

Nonresponsive WELL LOCATION NUMBER

LIVINGSTON COUNTY

ENVIRONMENTAL HEALTH

GEOLOGICAL SURVEY SAMPLE No.

11-200-003

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

911'

11-026

Nonresponsive

Nonresponsive

Nonresponsive

1 LOCATION OF WELL

County: Livingston

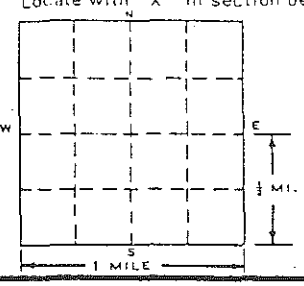
Township Name: Hartland

Distance And Direction from Road Intersections

Street address & City of We

Locate with "X" in section below

Sketch Map:



4 WELL DEPTH: (completed) Date of Completion

115' ft. 5/1/72

5

☑ Cable tool ☐ Rotary ☐ Driven ☐ Dug

☐ Hollow rod ☐ Jetted ☐ Bored ☐ ____

6 USE:

☐ Domestic ☐ Public Supply ☐ Industry

☐ Irrigation ☐ Air Conditioning ☑ Commercial

☐ Test Well ☐

7 CASING:

Diam. Threaded ☑ Welded ☐

4" in. to 113 ft. Depth

____ in. to ____ ft. Depth

Height: Above ~~Below~~ Surface 1 ft.

Weight 11 lbs./ft.

Drive Shoe? Yes ☑ No ☐

8 SCREEN:

Type: Rock Well Dia.: ____

Slot/Gauze ____ Length ____

Set between ____ ft. and ____ ft.

Fittings:

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Dry Yellow Sand	46'	46'
Fine Gray Sand	30'	76'
Med Gray Sand	8'	84'
Cemented Gravel	27'	111'
Sandstone (Soft)	02'	113'
Sandstone (Water Bearing)	05'	118'

9 STATIC WATER LEVEL

31' ft. below land surface

10 PUMPING LEVEL below land surface

40 ft. after 2 hrs. pumping 20 g.p.m.

____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ____ Chlorides (Cl) ____

Hardness ____ Other ____

12 WELL HEAD COMPLETION:

☐ In Approved Pit

☑ Pitless Adapter ☐ 12" Above Grade

13 Well Grouted? ☐ Yes ☐ No

☐ Neat Cement ☐ Bentonite ☐ ____

Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination

75 feet ____ Direction ST Type

Well disinfected upon completion ☑ Yes ☐ No

15 PUMP:

☐ Not installed

Manufacturer's Name Red Jacket

Model Number ____ HP ¾ Volts 230

Length of Drop Pipe 40' ft. capacity 12 G.P.M.

Type: ☑ Submersible

☐ Jet ☐ Reciprocating

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

AI

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

REGISTERED FIRM NAME: JIM FULMER

REGISTRATION NO. 0444

Address: 4780 Nicholson Road Fowlerville, Mich. 48836

Signed Jim Fulmer AUTHORIZED REPRESENTATIVE

Date 8/4/72

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. CO.

GEOLOGICAL SURVEY SAMPLE No. [redacted]

CT-420-017

WATER WELL RECORD

ACT 294 PA 1965

902'

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Twp.	Fraction	Section No.	Town	Range
[redacted]	HANDY	[redacted]	[redacted]	[redacted]	[redacted]

Nonresponsive

Nonresponsive

Nonresponsive

3 OWNER OF WELL

Address: [redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Top Soil	1'	6'
Yellow Clay	1'	7'
Med. Blue Clay	9'	16'
Soft Blue Clay	12'	28'
Med Blue Clay	15'	43'
Hard Blue Clay + Gravel	14	57'
Sandstone	3'	60'
Sandstone and Clay Mixed	13'	73'
Green Shale	4'	77'
Black Shale	7'	84'
Sandstone	13'	97'

4 WELL DEPTH: (completed) Date of Completion

97 ft. 2-12-69

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☐ Domestic ☒ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☒ Commercial ☐ Test Well ☐ ___

7 CASING: Diam. Threaded ☒ Welded ☐

4" in. to 85' ft. Depth

___ in. to ___ ft. Depth

Height: Above/Below surface 1 ft.

Weight 11 lbs/ft.

Drive Shoe? Yes ☒ No ☐

8 SCREEN:

Type: — Dia.: —

Slot/Gauze — Length —

Set between ___ ft. and ___ ft.

Fittings:

9 STATIC WATER LEVEL

14 ft. below land surface

10 PUMPING LEVEL below land surface

27 ft. after 5 hrs. pumping 15 g.p.m.

___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) 0.6 Chlorides (Cl) 25

Hardness 250

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☒ 12" Above Grade

13 GROUTING:

Well Grouted? ☐ Yes ☐ No

Material: ☐ Neat Cement ☐ ___

Depth: From ___ ft. to ___ ft.

14 SANITARY:

Nearest Source of possible contamination

___ feet ___ Direction ___ Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP:

Manufacturer's Name ___

Model Number ___ HP ___

Length of Drop Pipe ___ ft. capacity ___ G.P.M.

Type: ☐ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

NA

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Jim Fulmer Well Drilling 0994

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 4700 Nicholson Rd Co. Lapeer

Signed [redacted] Date 3-21-69

AUTHORIZED REPRESENTATIVE

D67D 100M 6-66

GEOLOGICAL SURVEY NO

WATER WELL AND PUMP RECORD

PERMIT NUMBER 89-02

1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number
LIVINGSTON	HANDY			

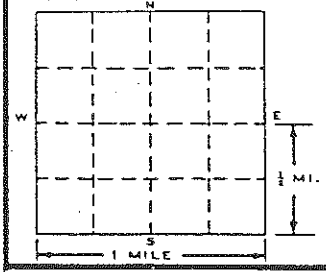
Distance And Direction From Road Intersection

Nonresponsive

Nonresponsive

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL:

Nonresponsive

Nonresponsive

4 WELL DEPTH: (completed) 60 ft. | Date of Completion 5-18-87

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Auger ☐ Jetted ☐

6 USE: ☒ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☐

7 CASING: Diameter ☒ Steel ☒ Threaded ☐ Plastic ☐ Welded

4 in. to 44 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 1 ft.

Weight 11 lbs./ft.

Drive Shoe ☒ Yes ☐ No

8 SCREEN: ☒ Not Installed

Type _____ Diameter _____

Slot/Gauze _____ Length _____

Set between _____ ft. and _____ ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

40 ft. after 2 hrs. pumping at 25 G.P.M.

_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION: ☒ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☐ Yes From _____ to _____ ft.

☐ Neat cement ☐ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type SEPTIC Distance 100 ft. Direction SOUTH

Well disinfected upon completion? ☒ Yes ☐ No

14 PUMP: ☐ Not Installed ☐ Pump Installation Only

Manufacturer's name MYERS

Model number _____ HP 1/2 Volts 230

Length of Drop Pipe 40 ft. capacity _____ G.P.M.

TYPE: ☒ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name EXTROLL

Model number 202 Capacity 42 Gallons

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
YELLOW SANDY CLAY	15	15
GRAVEL + CLAY W/ BOULDERS	27	42
LIMESTONE	18	60

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.

16. WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER W. D 0994

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 4700 NICHOLSON RD. FOWLERVI

Signed Jim Fulmer Date 5/18/87

AUTHORIZED REPRESENTATIVE

D67d 2/84

LOCAL HEALTH DEPT. COPY

Authority: Act 368 PA 1978
Completion: Required
Penalty: Conviction of a violatio of any provision is a misdemeanor.

GEOLOGICAL SURVEY SAMPLE No. 10-300-002

WATER WELL RECORD

ACT 294 PA 1965

887'

MICHIGAN DEPARTMENT OF PUBLIC HEALTH 10-001

1 LOCATION OF WELL

County: LIVINGSTON

Township Name: HANDY

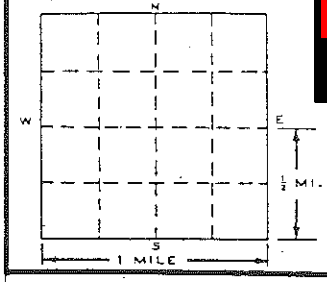
[redacted]

Distance And Direction from Road Intersections

[redacted]

Street [redacted]

Locate with "X" in Section



[redacted]

84' ft. 11-1-79

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ____

6 USE: ☐ Domestic ☒ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ____

7 CASING: Threaded ☒ Welded ☐ Diam. 4 in. to 46 ft. Depth; ____ in. to ____ ft. Depth

Height: Above/Below Surface 1 ft. Weight 11 lbs./ft. Drive Shoe? Yes ☒ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sandy Clay	10'	10'
Sand and Gravel	10'	20'
Clay and Gravel	5'	25'
Clay	5'	30'
Broken Sandrock	13'	43'
Limestone and Sandrock	7'	50'
Blue Shale	4'	54'
Limstone	7'	61'
Sandrock and Shale	23'	84'

USE A 2ND SHEET IF NEEDED

8 SCREEN: Type: ROCKWELL Dia.: ____ Slot/Gauze ____ Length ____ Set between ____ ft. and ____ ft. Fittings:

9 STATIC WATER LEVEL 10 ft. below land surface

10 PUMPING LEVEL below land surface 40 ft. after 2 hrs. pumping 50 g.p.m.

____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million: Iron (Fe) ____ Chlorides (Cl) ____ Hardness ____ Other ____

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☐ 12" Above Grade

13 Well Grouted? ☐ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ ____ Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination ____ feet ____ Direction ____ Type

Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: ☐ Not installed

Manufacturer's Name ____

Model Number ____ HP ____ Volts ____

Length of Drop Pipe ____ ft. capacity ____ G.P.M.

Type: ☐ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER, WELL DRILLING 0994

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 4700 NICHOLSON RD. FOWLERVILLE, MI.

Signed ____ AUTHORIZED REPRESENTATIVE Date 11-13-79

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT COPY

GEOLOGICAL SURVEY SAMPLE No.

10-300-002

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

888-

10-00

1 LOCATION OF WELL

County: LIVINGSTON

Township Name: HANDY

[redacted]

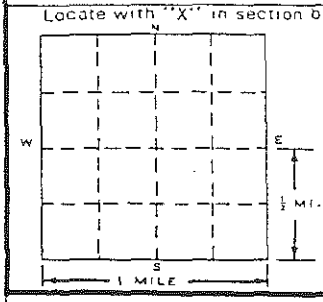
Distance And Direction from Road Intersections

[redacted]

Street address & City of Well Location

[redacted]

Locate with "X" in section below



[redacted]

3 [redacted]

4 125' ft. 11-12-79

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐

6 USE: ☐ Domestic ☒ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐

7 CASING: Threaded ☐ Welded ☒ Diam. 4 in. to 46 ft. Depth; ____ in. to ____ ft. Depth

Height: Above/Below Surface 1 ft. Weight 11 lbs./ft. Drive Shoe? Yes ☒ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Yellow Sandy Clay	8'	8'
Sand, Gravel & Clay	17'	25'
Shale and Gravel	3'	28'
Broken Limestone & Sandrock	6'	34'
Sandrock	11'	45'
Shale and Sandrock	12'	57'
Shale	13'	70'
Limstone	13'	83'
Shale and Sandrock	27'	110'
Sandrock	15'	125'
USE A 2ND SHEET IF NEEDED		

8 SCREEN: Type: ROCKWELL Dia.: ____ Slot/Gauze ____ Length ____ Set between ____ ft. and ____ ft. Fittings:

9 STATIC WATER LEVEL 8' ft. below land surface

10 PUMPING LEVEL below land surface 25 ft. after 2 hrs. pumping 30 g.p.m. ____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million: Iron (Fe) ____ Chlorides (Cl) ____ Hardness ____ Other ____

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☐ 12" Above Grade

13 Well Grouted? ☐ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ ____ Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination ____ feet ____ Direction ____ Type ____ Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: ☐ Not installed Manufacturer's Name ____ Model Number ____ HP ____ Volts ____ Length of Drop Pipe ____ ft. capacity ____ G.P.M. Type: ☐ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER, WELL DRILLING 0994

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 4700 NICHOLSON RD. FOWLERVILLE, MI

Signed ____ AUTHORIZED REPRESENTATIVE Date 11-13-79

D67d 100M - Rev. 12-68)

LOCAL HEALTH DEPT. COPY

10-300-002

WATER WELL RECORD

ACT 294 PA 1965

887-

MICHIGAN DEPARTMENT OF PUBLIC HEALTH 10-1003

1 LOCATION OF WELL

County: Livingston

Township Name: Handy

Nonresponsive

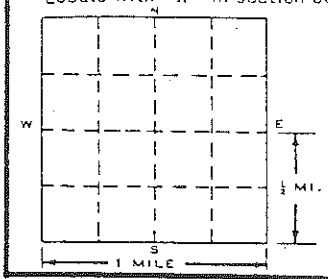
Distance And Direction from Road Intersections

Nonresponsive

Nonresponsive

Street ad

Locate with "X" in section below



3 OWNER OF WELL:

Nonresponsive

4 WELL DEPTH: (completed) 48 ft. **Date of Completion** 7/14/77

5 [X] Cable tool [ ] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Jetted [ ] Bored [ ]

6 USE: [ ] Domestic [X] Public Supply [ ] Industry [ ] Irrigation [ ] Air Conditioning [ ] Commercial [ ] Test Well [ ]

7 CASING: Threaded [X] Welded [ ] Diam. 4" 4 in. to 30'4" ft. Depth; ___ in. to ___ ft. Depth

Height: Above/Below Surface 1 ft. Weight 11 lbs./ft. Drive Shoe? Yes [X] No [ ]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sandy Clay and Gravel, mixed	08'	08'
Fine Yellow Sand	12'	20'
Hardpan	07'	27'
Limestone	21'	48'

USE A 2ND SHEET IF NEEDED

8 SCREEN: Rock Well

Type: ___ Dia.: ___

Slot/Gauze ___ Length ___

Set between ___ ft. and ___ ft.

Fittings:

9 STATIC WATER LEVEL

08 ft. below land surface

10 PUMPING LEVEL below land surface

25 ft. after 2 hrs. pumping 25 g.p.m.

___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ___ Chlorides (Cl) ___

Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit [X] Pitless Adapter [ ] 12" Above Grade

13 Well Grouted? [ ] Yes [ ] No [ ] Neat Cement [ ] Bentonite [ ] ___

Depth: From ___ ft. to ___ ft.

14 Nearest Source of possible contamination

75 feet N Direction septic Type

Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed

Manufacturer's Name: Red Jacket

Model Number ___ HP 1 Volts 230

Length of Drop Pipe 21 ft. capacity 12 G.P.M.

Type: [X] Submersible [ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER — REGISTERED BUSINESS NAME — 0994 REGISTRATION NO.

4700 Nicholson Road

Address: Fowlerville, Mich. 48836

Signed ___ AUTHORIZED REPRESENTATIVE Date 8/4/77

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. COPY

GEOLOGICAL SURVEY SAMPLE NO.

10-200-001

WATER WELL RECORD

ACT 294 PA 1965

912

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

10-200

Nonresponsive

Nonresponsive

1 LOCATION OF WELL

County: Livingston

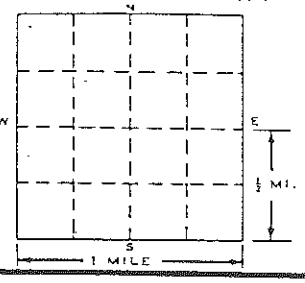
Township Name: Handy

Distance And Direction from Road Intersections

Street address & City of Well Location: SAME

Locate with "X" in section below

Sketch Map:



4 WELL DEPTH: (completed) 120 ft. Date of Completion 5/15/76

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐

7 CASING: Threaded ☒ Welded ☐ Diam. 4" 4 in. to 110 ft. Depth; ___ in. to ___ ft. Depth. Height: Above/Below XX. Surface 1 ft. Weight 11 lbs./ft. Drive Shoe? Yes ☒ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Dry Sandy Clay	30'	30'
Fine Gray Sand	20'	50'
Med Gray Sand (wh)	05'	55'
Gray Sand	33'	88'
Hardpan	22' XXX'	110'
Sandrock	10'	120'

USE A 2ND SHEET IF NEEDED

8 SCREEN: ROCK WELL

Type: ___ Dia.: ___

Slot/Gauze ___ Length ___

Set between ___ ft. and ___ ft.

Fittings:

9 STATIC WATER LEVEL 30 ft. below land surface

10 PUMPING LEVEL below land surface

40 ft. after 2 hrs. pumping 20 g.p.m.

___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ___ Chlorides (Cl) ___

Hardness ___ Other ___

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☒ Pitless Adapter ☐ 12" Above Grade

13 Well Grouted? ☐ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ ___

Depth: From ___ ft. to ___ ft.

14 Nearest Source of possible contamination

75 feet N Direction septic Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP: ☐ Not installed

Manufacturer's Name Myers

Model Number ___ HP ½ Volts 230

Length of Drop Pipe 40 ft. capacity 12 G.P.M.

Type: ☒ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

REGISTERED BUSINESS NAME ___ REGISTRATION NO. 0904

Address 4700 Nicholson Road Fowlerville, Mich. 48836

Signed ___ AUTHORIZED REPRESENTATIVE Date 5/19/76

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. COPY

10-200-002

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

913'

Nonresponsive

Nonresponsive

Nonresponsive

1 LOCATION OF WELL

County: Livingston | Twp.: Handy

ance And Direction from Road Intersections

OWNER No.

Street address & City of Well Locati

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
sand- fine- gray	15	15
sand- fine- white	5	20
sand- fine- brown	10	30
sand- fine- silty- gray	10	40
sand- fine- gray	6	46

4 WELL DEPTH: (completed) 46 ft. Date of Completion 12-8-66

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☒ Hollow rod ☐ Jetted ☐ Bored - ☐

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐

7 CASING: Diam. 2 in. to 43 ft. Depth; Threaded ☐ Welded ☐; Height: Above/Below surface ft.; Weight 3.75 lbs/ft.; Drive Shoe? Yes ☒ No ☐

in. to ft. Depth

8 SCREEN: Type: 121 Dia.: 1¼

Slot/Gauze 80 Length 36"

Set between 43 ft. and 46 ft.

Fittings:

9 STATIC WATER LEVEL 34' ft. below land surface

10 PUMPING LEVEL below land surface

ft. after hrs. pumping g.p.m.

ft. after hrs. pumping g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) Chlorides (Cl)

Hardness

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☐ 12" Above Grade

13 GROUTING: Well Grouted? ☐ Yes ☐ No

Material: ☐ Neat Cement ☐

Depth: From ft. to ft.

14 SANITARY:

Nearest Source of possible contamination

15 feet Direction Septic Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP:

Manufacturer's Name Not installed

Model Number HP

Length of Drop Pipe ft. capacity G.P.M.

Type: ☐ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Steinacker Drilling Co. 0755

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1783 Euclid Rd. Brighton, Mich

Signed Date 1-23-67

AUTHORIZED REPRESENTATIVE

D670 100M 5-66

LOCAL HEALTH DEPT. COPY

U-300-009
GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER 10-00

Nonresponsive

Nonresponsive

Nonresponsive

Nonresponsive

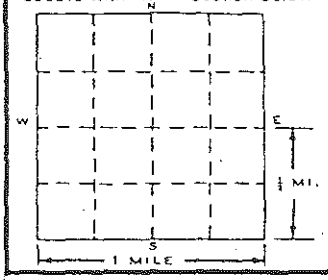
Nonresponsive

1 LOCATION OF WELL

County: LIVINGSTON

Township Name: Handy

Locate with "X" in Section Below



Sketch Map:

Nonresponsive

4 WELL DEPTH: 80 FT. | Date Completed MO. 7 DAY 13 YEAR 90 | [X] New Well [ ] Replacement Well

5 [ ] Cable tool [X] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Auger [ ] Jetted [ ]

6 USE: [X] Domestic [ ] Type I Public [ ] Type III Public [ ] Irrigation [ ] Type IIa Public [ ] Heat pump [ ] Test Well [ ] Type IIb Public [ ]

7 CASING: Diameter [X] Steel [X] Threaded [ ] Plastic [ ] Welded
4 in. to 51 ft. depth
___ in. to ___ ft. depth
Grouted Drill Hole Diameter
___ in. to ___ ft. depth
___ in. to ___ ft. depth
Height: Above/Below Surface 1 ft.
Weight 11 lbs./ft.
Drive Shoe [X] Yes [ ] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
YELLOW SAND	15	15
MUDDY GRAVEL	25	40
HARD PAN	7	47
SHALE	3	50
SANDSTONE	28	80

USE A 2ND SHEET IF NEEDED

8 SCREEN: [X] Not Installed ROCK
Type ___ Diameter ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen ___ ft. Other ___

9 STATIC WATER LEVEL: 25 ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface
50 ft. after 2 hrs. pumping at 20 G.P.M
___ ft. after ___ hrs. pumping at ___ G.P.M.

11 WELL HEAD COMPLETION: [X] Pitless adapter [ ] 12" above grade [ ] Basement offset [ ] Approved pit

12 WELL GROUTED? [ ] No [X] Yes From 0 to 51 ft.
[ ] Neat cement [X] Bentonite [ ] Other ___
No. of bags of cement ___ Additives ___

13 Nearest source of possible contamination
Type SEPTIC Distance 75 ft. Direction WEST
Well disinfected upon completion? [X] Yes [ ] No
Was old well plugged? [ ] Yes [ ] No

14 PUMP: [ ] Not Installed [ ] Pump Installation Only
Manufacturer's name MYERS
Model number ___ HP 1½ Volts 230
Length of Drop Pipe 40 ft. capacity 10 G.P.M.
TYPE: [X] Submersible [ ] Jet ___
PRESSURE TANK
Manufacturer's name EXTRAOL
Model number 203 Capacity ___ Gallons

15. Remarks, elevation, source of data, etc.

Rig Operator's Name:

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER WD — REGISTERED BUSINESS NAME
0994 — REGISTRATION NO.
4700 NICHOLSON RD. FOWLERVILLE, MI 48836
Signed Jim Fulmer — AUTHORIZED REPRESENTATIVE
Date 8-10-90

D67d 2/89

Authority: Act 368 PA 1978
Completion: Required
Penalty: Conviction of a violation of any provision is a misdemeanor.

GEOLOGICAL SURVEY COPY

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

Nonresponsive

Nonresponsive

1 LOCATION OF WELL

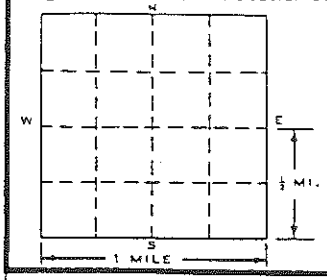
County: LIVINGSTON | Township Name: HANDY

Distance And Direction from Road Intersections

Same

Street address & City of Well Location

Locate with "X" in section below | Sketch Map:



2 OWNER OF WELL

4 WELL DEPTH: (completed) 100' ft. | Date of Completion 8/11/76

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ____

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐

7 CASING: Threaded ☒ Welded ☐ | Diam. 4" | 4 in. to 90 ft. Depth | ____ in. to ____ ft. Depth | Height: Above ~~Xxx~~ Surface 1 ft. | Weight 11 lbs./ft. | Drive Shoe? Yes ☒ No ☐

8 SCREEN: ROCK WELL

Type: ____ Dia.: ____

Slot/Gauze ____ Length ____

Set between ____ ft. and ____ ft.

Fittings:

9 STATIC WATER LEVEL

~~88~~ ft. below land surface

10 PUMPING LEVEL below land surface

40 ft. after 2 hrs. pumping 25 g.p.m.

____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ____ Chlorides (Cl) ____

Hardness ____ Other ____

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☒ Pitless Adapter ☐ 12" Above Grade

13 Well Grouted? ☐ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ ____

Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination

75 feet S. E. Direction Septic Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP: ☐ Not installed

Manufacturer's Name Myers

Model Number 485364-EA HP ½ Volts 230

Length of Drop Pipe 45 ft. capacity 12 G.P.M.

Type: ☒ Submersible ☐ Jet ☐ Reciprocating

2 FORMATION

FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Yellow Sand And Gravel	70'	70'
Green Sand Rock	20'	90'
White and Broen Sand Rock	10'	100'

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

At

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Jim Fulmer | 0994

REGISTERED BUSINESS NAME | REGISTRATION NO.

4700 Nicholson Road

Address: Howell, Mich. 48843

Signed Jim Fulmer AUTHORIZED REPRESENTATIVE | Date 8/16/76

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. COPY

GEOLOGICAL SURVEY NO

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER

1 LOCATION OF WELL

County: Liv

Township Name: Handy

[redacted]

Distance And Direction From Road Intersection

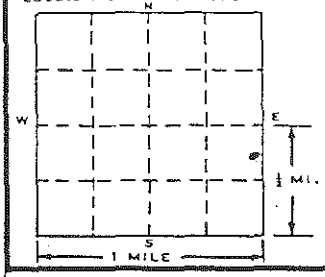
[redacted]

Street

3 OWNER OF WELL

[redacted]

Locate with "X" in Section Below



Sketch Map:

[redacted]

4 WELL DEPTH: 97 FT.

Date Completed: MO. DAY YEAR 7 96

☑ New Well ☐ Replacement Well

5 ☐ Cable tool ☑ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Auger ☐ Jetted ☐

6 USE: ☑ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☐

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☑ Welded

5 in. to 75 ft. depth

in. to ft. depth

Grouted Drill Hole Diameter

in. to ft. depth

in. to ft. depth

Height: Above/Below

Surface 1 ft.

Weight 2.5 lbs./ft.

Drive Shoe ☑ Yes ☐ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand	15	15
Brown clay	14	29
Gray clay	19	48
Gravel	11	59
Clay & Gravel	9	68
Sandstone	29	97

USE A 2ND SHEET IF NEEDED

8 SCREEN: ☑ Not Installed

Type Diameter

Slot/Gauze Length

Set between ft. and ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check

☐ Blank above screen ft. Other

9 STATIC WATER LEVEL:

18 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

40 ft. after 2 hrs. pumping at 30 G.P.M.

ft. after hrs. pumping at G.P.M.

11 WELL HEAD COMPLETION: ☑ Pitless adapter ☑ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From to ft.

☐ Neat cement ☑ Bentonite ☐ Other

No. of bags of cement Additives

13 Nearest source of possible contamination

Type Syptic Distance 96 ft. Direction N

Well disinfected upon completion? ☑ Yes ☐ No

Was old well plugged? ☐ Yes ☐ No

14 PUMP: ☐ Not Installed ☐ Pump Installation Only

Manufacturer's name Mcdonald

Model number 71050 E2 HP 1/2 Volts 230

Length of Drop Pipe 40 ft. capacity 10 G.P.M.

TYPE: ☑ Submersible ☐ Jet

PRESSURE TANK:

Manufacturer's name Well Tank

Model number 203 Capacity 11 Gallons

15. Remarks, elevation, source of data, etc.

NI

17. Rig Operator's Name:

[signature]

16. WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[signature] 18-4823

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 7631 Sargent

Signed [signature] Date Oct 10/9

AUTHORIZED REPRESENTATIVE

D67d 2/89

Authority: Act 368 PA 1978

Completion: Required

Penalty: Conviction of a violation of any provision is a misdemeanor.

LOCAL HEALTH DEPT. COPY.

GEOLOGICAL SURVEY NO

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

905

PERMIT NUMBER

1 LOCATION OF WELL

County: LIVINGSTON

Township Name: HANDY

Distance And Direction From Road Intersection

Nonresponsive

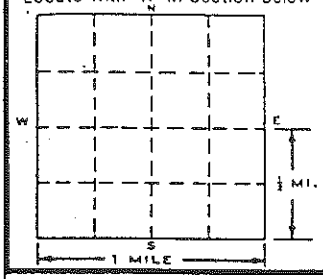
Nonresponsive

Nonresponsive

Street Address & City of Well Location

Locate with "X" in Section Below

Sketch Map:



3 OWNER OF WELL:

4 WELL DEPTH: 112 FT. Date Completed: MO. 4 DAY 16 YEAR 73

☒ New Well ☐ Replacement Well

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Auger ☐ Jetted ☐

6 USE: ☐ Domestic ☒ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☐

7 CASING: Diameter ☒ Steel ☒ Threaded ☐ Plastic ☐ Welded

4 in. to 95 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below

Surface 1 ft.

Weight 11 lbs./ft.

Drive Shoe ☒ Yes ☐ No

8 SCREEN: ☒ Not Installed

Type _____ Diameter 4½"

Slot/Gauze _____ Length _____

Set between _____ ft. and _____ ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL:

20 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

41 ft. after 1 hrs. pumping at 20 G.P.M.

_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION: ☒ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☒ No ☐ Yes From _____ to _____ ft.

☐ Neat cement ☐ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type SEPTIC Distance 75 ft. Direction EAST

Well disinfected upon completion? ☐ Yes ☐ No

Was old well plugged? ☐ Yes ☐ No

14 PUMP: ☐ Not Installed ☐ Pump Installation Only

Manufacturer's name RED JACKET

Model number _____ HP 1 Volts _____

Length of Drop Pipe 42 ft. capacity _____ G.P.M.

TYPE: ☒ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name EXTROL

Model number _____ Capacity 82 Gallons

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
SANDY YELLOW CLAY	20	20
YELLOW SAND	20	40
GRAY FINE SAND	45	85
BLUE CLAY	7	92
BLUE SHALE	3	95
SANDROCK	17	112
COPY		

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.

YT

17. Rig Operator's Name:

16. WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER W.D. — REGISTERED BUSINESS NAME

0994 — REGISTRATION NO.

Address 4700 NICHOLSON RD. FOWLERVILLE, MI 48

Signed _____ — AUTHORIZED REPRESENTATIVE

Date 4-16-93

Authority: Act 368 PA 1978

Completion: Required

Penalty: Conviction of a violation of any provision is a misdemeanor.

D67d 12/85

LOCAL HEALTH DEPT. COPY

GEOLOGICAL SURVEY SAMPLE No. [ ]

4-400-032

WATER WELL RECORD

ACT 294 PA 1965

912

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County: Livingston | Township Name: Handy

Nonresponsive

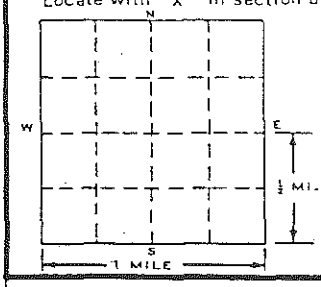
Distance And Direction from Road In

Nonresponsive

Nonresponsive

Street address & City of Well Locatio

Locate with "X" in section below



Sketch Map:

4 WELL DEPTH: (completed) 140 ft. Date of Completion 9/13/72

5 [x] Cable tool [ ] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Jetted [ ] Bored [ ]

6 USE: [ ] Domestic [ ] Public Supply [ ] Industry [ ] Irrigation [ ] Air Conditioning [x] Commercial [ ] Test Well [ ]

7 CASING: Threaded [x] Welded [ ] Diam. 4"

4 in. to 90 ft. Depth

in. to ft. Depth

Height: Above ~~Below~~ Surface 1 ft.

Weight 11 lbs./ft.

Drive Shoe? Yes [x] No [ ]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Yellow Sandy Clay	15'	15'
Brown Clay	63'	78'
Fine silty Sand	7'	85'
Soft blue shale	5'	90'
Sandstone	8'	98'
Blue shale	42'	140'

8 SCREEN:

Type: [ ] Dia.:

Slot/Gauze [ ] Length

Set between [ ] ft. and [ ] ft.

Fittings:

Rock Well

9 STATIC WATER LEVEL

ft. below land surface

10 PUMPING LEVEL below land surface

63 ft. after 2 hrs. pumping 20 g.p.m.

ft. after hrs. pumping g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) Chlorides (Cl)

Hardness Other

12 WELL HEAD COMPLETION: [ ] In Approved Pit [x] Pitless Adapter [ ] 12" Above Grade

13 Well Grouted? [ ] Yes [ ] No [ ] Neat Cement [ ] Bentonite [ ]

Depth: From ft. to ft.

14 Nearest Source of possible contamination

75 feet Direction ST Type

Well disinfected upon completion [x] Yes [ ] No

15 PUMP: [ ] Not installed

Manufacturer's Name Red Jacket

Model Number HP 1½ Volts 230

Length of Drop Pipe 84 ft. capacity 18 G.P.M.

Type: [x] Submersible [ ] Jet [ ] Reciprocating

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

NI

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER — REGISTERED BUSINESS NAME

0994 — REGISTRATION NO.

Address 4700 Nicholson Road Fowlerville, Mich. 48836

Signed Jim Fulmer — AUTHORIZED REPRESENTATIVE

Date 9/20/72

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. COPY

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

910'

1 LOCATION OF WELL

County: LIVINGSTON | Township Name: HANDY

Distance And Direction from Road Intersections

Nonresponsive

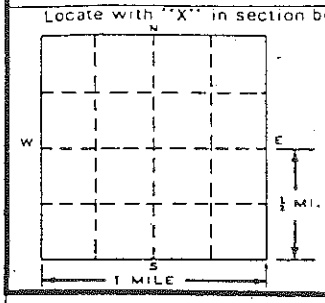
Nonresponsive

Nonresponsive

Nonresponsive

Street address & City of Well Locat

Locate with "X" in section bel



WELL DEPTH: (completed) 112' ft. Date of Completion 4/16/73

- [X] Cable tool [ ] Rotary [ ] Driven [ ] Dug
- [ ] Hollow rod [ ] Jetted [ ] Bored [ ]

USE: [X] Domestic [ ] Public Supply [ ] Industry [ ] Irrigation [ ] Air Conditioning [ ] Commercial [ ] Test Well [ ]

CASING: Threaded [X] Welded [ ] Diam. 4" 4" in. to 95 ft. Depth; ___ in. to ___ ft. Depth

Height: Above/Below Surface 1 ft. Weight 11 lbs./ft. Drive Shoe? Yes [X] No [ ]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
SANDY Yellow CLAY	20'	20'
Yellow SAND	20'	40'
GRAY fine SAND	45'	85'
Blue CLAY	07'	92'
SAND ROCK	17'	112'

USE A 2ND SHEET IF NEEDED

8 SCREEN: Type: ___ Dia.: ___ Slot/Gauze ROCK Well Length ___ Set between ___ ft. and ___ ft. Fittings:

9 STATIC WATER LEVEL 20 ft. below land surface

10 PUMPING LEVEL below land surface 41' ft. after 2 hrs. pumping 20 g.p.m.

___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: Iron (Fe) ___ Chlorides (Cl) ___ Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit [X] Pitless Adapter [ ] 12" Above Grade

13 Well Grouted? [ ] Yes [ ] No [ ] Neat Cement [ ] Bentonite [ ] ___ Depth: From ___ ft. to ___ ft.

14 Nearest Source of possible contamination 75 feet N Direction ST Type

Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed Manufacturer's Name Red JACKET Model Number ___ HP 1 Volts 230 Length of Drop Pipe ___ ft. capacity ___ G.P.M.

Type: [X] Submersible [ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.

TR

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER — REGISTERED BUSINESS NAME — 0994 — REGISTRATION NO.

4700 Nicholson Road

Address Fowlerville, Mich. 48836

Signed Jim Fulmer — AUTHORIZED REPRESENTATIVE — Date 4/18/73

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. COPY

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

8941

14-006

1 LOCATION OF WELL

County: LIVINGSTON | Twp.: HANDY

Distance And Direction from Road Intersections

[redacted]

OWNER OF WELL: [redacted]

Address: [redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	10	10
Sand	10	20
Clay	20	40
Brown sand	20	60
brown sandrock	10	70
White sandstone	15	85
grey shale	5	90
Shale black	10	100
shale grey	20	120
shale black	20	140
shale grey	30	170
Sandrock	20	190
Shale	5	195
Sandstone	30	225

4 WELL DEPTH: (completed) 225 ft. Date of Completion 3-10-67

5 [X] Cable tool [ ] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Jetted [ ] Bored [ ] ___

6 USE: [X] Domestic [ ] Public Supply [ ] Industry [ ] Irrigation [ ] Air Conditioning [ ] Commercial [ ] Test Well [ ] ___

7 CASING: Diam. 3 in. to 76 ft. Depth; Threaded [X] Welded [ ]; ___ in. to ___ ft. Depth; Height: Above/Below surface — ¾ ft.; Weight 7.7 lbs/ft.; Drive Shoe? Yes [X] No [ ]

8 SCREEN: Type: ___ Dia.: ___ Slot/Gauze ___ Length ___ Set between ___ ft. and ___ ft. Fittings: ___

9 STATIC WATER LEVEL 8 ft. below land surface

10 PUMPING LEVEL below land surface 28 ft. after 5 hrs. pumping 20 g.p.m.; ___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: Iron (Fe) ___ Chlorides (Cl) ___ Hardness ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit [ ] Pitless Adapter [ ] 12" Above Grade

13 GROUTING: Well Grouted? [ ] Yes [X] No; Material: [ ] Neat Cement [ ] ___; Depth: From ___ ft. to ___ ft.

14 SANITARY: Nearest Source of possible contamination 50 feet S Direction Septic Type; Well disinfected upon completion [ ] Yes [X] No

15 PUMP: Manufacturer's Name ___ Model Number ___ HP ___ Length of Drop Pipe ___ ft. capacity ___ G.P.M. Type: [ ] Submersible [ ] ___ [ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc. AS

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Hart well Drilling — REGISTERED BUSINESS NAME — 0522 — REGISTRATION NO.

Address 1148 S Jefferson Mt Clemens

Signed [signature] — AUTHORIZED REPRESENTATIVE — Date 3-22-67

D67D 100M 6-66

LOCAL HEALTH DEPT. COPY

WATER WELL RECORD
ACT 294

MICHIGAN DEPARTMENT OF PUBLIC HEALTH 14-00

Nonresponsive

Nonresponsive

Nonresponsive

Nonresponsive

Nonresponsive

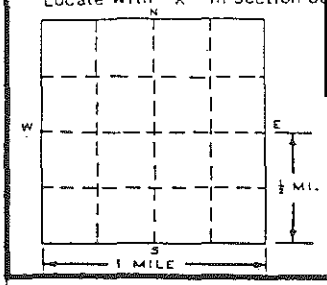
1 LOCATION OF WELL

County: LIV | Township Name: HANDY

Distance And Direction from Road Intersections:

Street address & City of Well:

Locate with "X" in section be



4 WELL DEPTH: (completed) 74 ft. | Date of Completion 4/15/71

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ____

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ____

7 CASING: Threaded ☒ Welded ☐ | Height: Above/Below Surface 1 ft.

Diam. 2 in. to 74 ft. Depth | Weight ____ lbs./ft.

____ in. to ____ ft. Depth | Drive Shoe? Yes ☒ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
YELLOW SAND	7'	7'
HARD BLUE CLAY	18	25'
SALT " "	20'	45'
HARD LIMESTONE	9'	54'
SOFT BLUE SHALE & SAND	18'	72'
LIMESTONE	2'	74'

8 SCREEN:

Type: JOHNSON S.S. Dia.: ____

Slot/Gauze 7 Length ____

Set between 72 ft. and 74 ft.

Fittings:

9 STATIC WATER LEVEL

19 ft. below land surface

10 PUMPING LEVEL below land surface

60 ft. after 2 hrs. pumping 18 g.p.m.

____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ____ Chlorides (Cl) ____

Hardness ____ Other ____

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☒ Pitless Adapter ☐ 12" Above Grade

13 Well Grouted? ☐ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ ____

Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination

75 feet N Direction ST Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP: ☐ Not installed

Manufacturer's Name RED JACKET

Model Number ____ HP ½ Volts 230 1

Length of Drop Pipe 53 ft. capacity 15 G.P.M.

Type: ☐ Submersible ☒ Jet ☐ Reciprocating

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

AI

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Jim Fulmer 0994

REGISTERED BUSINESS NAME | REGISTRATION NO.

Address 4700 Nicholson - Fowl.

Signed Jim Fulmer Date 4/16/71

AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

PERMIT NUMBER.

Nonresponsive

Nonresponsive

Nonresponsive

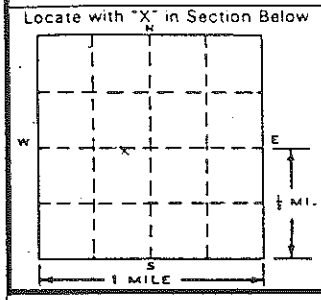
1 LOCATION OF WELL

County: LIVINGSTON | Township Name: HANDY

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below | Sketch Map:



4 WELL DEPTH: 118 FT. | Date Completed: MO. 5 DAY 10 YEAR 84 | ☒ New Well ☐ Replacement Well

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Auger ☐ Jetted ☐

6 USE: ☒ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☐

7 CASING: Diameter ☒ Steel ☒ Threaded ☐ Plastic ☐ Welded
4 in. to 90 ft. depth
_____ in. to _____ ft. depth
Grouted Drill Hole Diameter
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface 1 ft.
Weight 11 lbs./ft.
Drive Shoe ☒ Yes ☐ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
CLAY	8	8
SAND	24	32
SAND + GRAVEL	29	61
CLAY	10	71
SAND + GRAVEL	17	88
LIMESTONE	20	108
SANDSTONE	10	118
DUPLICATE COPY		
USE A 2ND SHEET IF NEEDED		

8 SCREEN: ☒ Not Installed
Type _____ Diameter _____
Slot/Gauze _____ Length _____
Set between _____ ft. and _____ ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL:
8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
60 ft. after 2 hrs. pumping at 20 G.P.M.
_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION: ☒ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☐ Yes From _____ to _____ ft.
☐ Neat cement ☐ Bentonite ☐ Other _____
No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination
Type SEPTIC Distance 75 ft. Direction EAST
Well disinfected upon completion? ☒ Yes ☐ No
Was old well plugged? ☐ Yes ☐ No

14 PUMP: ☐ Not Installed ☐ Pump Installation Only
Manufacturer's name RED JACKET
Model number _____ HP 1/2 Volts 230
Length of Drop Pipe 50 ft. capacity 18 G.P.M.
TYPE: ☒ Submersible ☐ Jet _____
PRESSURE TANK:
Manufacturer's name NOLAND
Model number _____ Capacity 42 Gallon

15. Remarks, elevation, source of data, etc.
MI

17. Rig Operator's Name:

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
JIM FULMER WELL DRILLING 0994
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 4748 NICHOLSON RD. FOWLERVILLE, MI. 48836
Signed James E. Fulmer Jr. Date 5-10-84
AUTHORIZED REPRESENTATIVE

Authority: Act 368 PA 1978
Completion: Required
Penalty: Conviction of a violatio of any provision is a misdemeanor.

D67d 2/89

WATER WELL RECORD
ACT 294

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

14-00

Nonresponsive

Nonresponsive

Nonresponsive

Nonresponsive

Nonresponsive

1 LOCATION OF WELL

County: LIVINGSTON

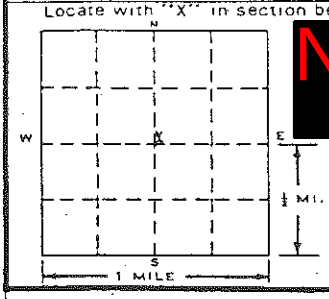
Township Name: HANDY

Distance And Direction from Road

Street address & City of Well Loca

Locate with "X" in section below

Sketch Map:



3 OWNER OF WELL:

4 WELL DEPTH: (completed) 110 ft. Date of Completion 11/6/76

5 [X] Cable tool [ ] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Jetted [ ] Bored [ ] ____

6 USE: [X] Domestic [ ] Public Supply [X] Industry [ ] Irrigation [ ] Air Conditioning [ ] Commercial [ ] Test Well [ ] ____

7 CASING: Threaded [X] Welded [ ] Height: Above/Below [XX] Surface

Diam. 4" 4 in. to 71 ft. Depth — Weight 11 lbs./ft. — 1 ft.

____ in. to ____ ft. Depth — Drive Shoe? Yes [X] No [ ]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Hard Yellow Clay	06'	06'
Fine Gray Sand	29'	35'
Med Gray Sand(wb)	04'	39'
Brown Clay	13'	52'
Limestone	19'	71'
Sandstone	14'	85'
Limestone and Sandstone, Mixed	15'	100'
Brown Shale	10'	110'

USE A 2ND SHEET IF NEEDED

8 SCREEN: Rock Well

Type: ____ Dia.: ____

Slot/Gauze ____ Length ____

Set between ____ ft. and ____ ft.

Fittings:

9 STATIC WATER LEVEL

08 ft. below land surface

10 PUMPING LEVEL below land surface

40 ft. after 2 hrs. pumping 35 g.p.m.

____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ____ Chlorides (Cl) ____

Hardness ____ Other ____

12 WELL HEAD COMPLETION: [ ] In Approved Pit [X] Pitless Adapter [ ] 12" Above Grade

13 Well Grouted? [ ] Yes [ ] No [ ] Neat Cement [ ] Bentonite [ ] ____

Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination

____ feet ____ Direction ____ Type

Well disinfected upon completion [ ] Yes [ ] No

15 PUMP: [ ] Not installed

Manufacturer's Name ____

Model Number ____ HP ____ Volts ____

Length of Drop Pipe ____ ft. capacity ____ G.P.M.

Type: [ ] Submersible [ ] Jet [ ] Reciprocating

LIVINGSTON COUNTY HEALTH DEPARTMENT JAN 3 1977

16 Remarks, elevation, source of data, etc.

TJ

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JIM FULMER — REGISTERED BUSINESS NAME — 0994 — REGISTRATION NO.

Address: 4700 Nicholson Road, Fowlerville, Mich. 48836

Signed: Jim Fulmer — AUTHORIZED REPRESENTATIVE — Date: 11/8/76

D67d 100M (Rev. 12-68)

LOCAL HEALTH DEPT. COPY

15-100-0001
GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

905-

PERMIT NUMBER 15-001

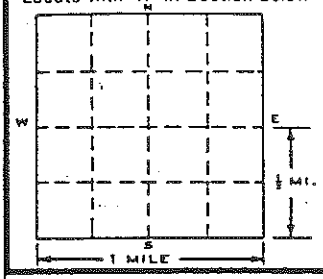
Nonresponsive

Nonresponsive

1 LOCATION OF WELL

County: LIVINGSTON
Township Name: HANDY
Distance And Direction From Road Intersection:
Street Address & City of Well Location:

Locate with "X" in Section Below



Sketch Map:

4 WELL DEPTH: 110 FT. Date Completed MO. 10 DAY 21 YEAR 87 — [X] New Well [ ] Replacement Well

5 [ ] Cable tool [X] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Auger [ ] Jetted [ ]

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public [ ] Irrigation [ ] Type IIa Public [ ] Heat pump [ ] Test Well [ ] Type IIb Public [ ]

7 CASING: Diameter [X] Steel [X] Threaded [ ] Plastic [ ] Welded
4 in. to 68 ft. depth
____ in. to ____ ft. depth
Grouted Drill Hole Diameter
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface 1 ft.
Weight 11 lbs./ft.
Drive Shoe [X] Yes [ ] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
YELLOW CLAY	25	25
GRAY CLAY & GRAVEL	35	60
SHALE & SANDROCK	15	75
SANDROCK	35	110

8 SCREEN: [X] Not Installed ROCK
Type ____ Diameter ____
Slot/Gauze ____ Length ____
Set between ____ ft. and ____ ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check [ ] Blank above screen ____ ft. Other ____

9 STATIC WATER LEVEL: 15 ft. below land surface [ ] Flow

10 PUMPING LEVEL—below land surface
55 ft. after 2 hrs. pumping at 15 G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: [X] Pitless adapter [ ] 12" above grade [ ] Basement offset [ ] Approved pit

12 WELL GROUTED? [ ] No [ ] Yes From ____ to ____ ft.
[ ] Neat cement [ ] Bentonite [ ] Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type SEPTIC Distance 75 ft. Direction WEST
Well disinfected upon completion? [X] Yes [ ] No
Was old well plugged? [ ] Yes [ ] No

14 PUMP: [ ] Not Installed [ ] Pump Installation Only
Manufacturer's name GOULDS
Model number ____ HP 1/2 Volts 230
Length of Drop Pipe 60 ft. capacity ____ G.P.M.
TYPE: [X] Submersible [ ] Jet ____
PRESSURE TANK:
Manufacturer's name EXTROLL
Model number 202 Capacity 42 Gallons

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.
TD

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
JIM FULMER W.D. 0994
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 4700 NICHOLSON RD. FOWLERVILLE, MI. 48836
Signed Jim Fulmer Date 1-4-88
AUTHORIZED REPRESENTATIVE

17. Rig Operator's Name:

D67d-12/85

KAS Authority: Act 368 PA 1978
Completion: Required
Penalty: Conviction of a violation of any provision is a

GEOLOGICAL SURVEY NO. 15-100-002

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

905'

PERMIT NUMBER 15-002

LOCATION OF WELL

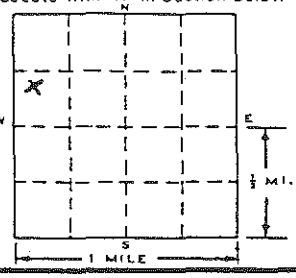
County: Livingston

Township Name: Handy

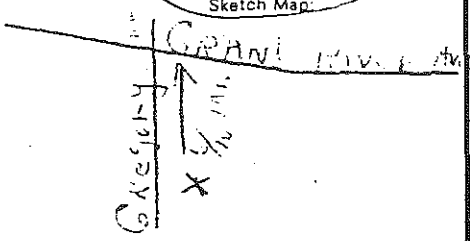
Distance And Direction From Road Intersection

[redacted]

Locate with "X" in Section Below



Sketch Map:



4 WELL DEPTH: 220 FT. Date Completed MO. 7 DAY 30 YEAR 90 [X] New Well [ ] Replacement Well

5 [ ] Cable tool [X] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Auger [ ] Jetted [ ]

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public [ ] Irrigation [ ] Type IIa Public [ ] Heat pump [ ] Test Well [ ] Type IIb Public [X] Water Supply for oi rig

7 CASING: Diameter PVC [ ] Steel [ ] Threaded [X] Plastic [X] Welded
5 in. to 77 ft. depth
in. to ft. depth
Grouted Drill Hole Diameter 7 7/8 in. to 75'3" ft. depth
in. to ft. depth
Height: Above/~~Below~~
Surface 21" ~~x~~
Weight 2.87 lbs./ft.
Drive Shoe [X] Yes [ ] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Fill	3	3
Brown Clay	9	12
Gravel - small	7	19
Gray Clay	18	37
Gravel-small / Gray Clay	28	65
Limestone	5	70
Gray Shale	2	72
Green Sandstone	23	95
Gray Sandstone	10	105
White Sandstone	55	140
Green Shale	3	143
Limestone	7	150
Gray/Black Shale	15	165
White Sandstone	55	220

USE A 2ND SHEET IF NEEDED

8 SCREEN: [X] Not Installed
Type ____ Diameter ____
Slot/Gauze ____ Length ____
Set between ____ ft. and ____ ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen ____ ft. Other ____

9 STATIC WATER LEVEL: 12 ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface
60 ft. after ____ hrs. pumping at 100 ~~t~~ G.P.M. w/air
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: [ ] Pitless adapter [X] 2" above grade [ ] Basement offset [ ] Approved pit

12 WELL GROUTED? [ ] No [X] Yes From ____ to ____ ft.
[ ] Neat cement [X] Bentonite [ ] Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type ____ Distance ____ ft. Direction ____
Well disinfected upon completion? [X] Yes [ ] No
Was old well plugged? [ ] Yes [ ] No

14 PUMP: [ ] Not Installed [ ] Pump Installation Only
Manufacturer's name Temporary
Model number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
TYPE: [ ] Submersible [ ] Jet ____
PRESSURE TANK:
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

15. Remarks, elevation, source of data, etc.

TI

Lease: Dey 1-15

17. Rig Operator's Name: Felipe Garcia Jr.

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Hart Well Drilling Company 1686
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 1154 S. Jefferson St. Mason MI 48854
Signed [signature] Date 8-3-90
AUTHORIZED REPRESENTATIVE

Authority: Act 368 PA 1978
Completion: Required
Penalty: Conviction of a violation

D67d 2/89

LAYNE-NORTHERN COMPANY

Incorporated

MISHAWAKA, INDIANA

Well 8 ?

☐ TEST

☐ PERMANENT

Job No. _____

WELL LOG No. _____ CITY Fowlerville County Livingston

Owner Village Township Handy

Section [redacted]

Location [redacted] State Michigan

From Land Description _____ ft. East and _____ ft. North of SW Corner of Sectio

From Street or Road _____

FORMATION FOUND — DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Pleistocene: Turf & cinders, ~~reddish yellow clay dry~~	0	1	1	
Reddish yellow clay, dry and hard	1	10	9	
"Pre water bearing sand" - dry	10	15	5	
Gray, oxidized, fine loose, wet, "Pre water bearing sand coarser	15	25	10	
Gray oxidized coarser to hardpan and cemented gravel	25	30	5	
Lt. gray oxidized fine to coarse water bearing sand, gravel and some stones	30	35	5	
Stratified, fine to coarse water bearing sand and gravel between cemented strata	35	40	5	
Gray, fine to coarse water bearing sand and gravel with clay ribs	40	61'4"	21' 4"	
Saginaw: Brownish elamel of clay, fine grained sand-rock	61'4"	68'	6' 8"	
Greenish shales predominate with thin gray sandrock	68'	71' 9"	3' 9"	
Stratified greenish shales and gray hard sandrock abrasin	71' 9"	75'	3' 3"	
Stratified very hard brown siliceous sand rock	75'	80'	5	
Stratified, very hard 1 drill cut 5", 1 cut 4", and 1 cut 3½", narrowed and redressed.	80'	82' 9"	2' 9"	
Stratified very hard dark brown very abrasive quartz rock	82' 9"	84	1' 3"	

_____ inch diameter hole drilled by ☐ Cable Tool ☐ Rotary ☐ Jetting

Pipe left in hole

Date Started _____ Finished _____

DRILLER

LAYNE-NORTHERN COMPANY

Incorporated

MISHAWAKA, INDIANA

Well 5 ?

-2-

☐ TEST

☐ PERMANENT

Job No. _____

WELL LOG No. _____ CITY _____ County _____

Owner _____ Township _____

_____ Section _____

Location State _____

From Land Description _____ ft. East and _____ ft. North of SW Corner of Sectic

From Street or Road _____

FORMATION FOUND — DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Stratified lighter hard sandrock with thin gray shales	84	90	6	
Stratified thin hard plates of buff and thin gray non water bearing sandrock	90	100	10	
Stratified gray micaeous water bearing sandrock and thin gray shales (head?)	100	115	15	
Stratified, gray micaeous quartz, water bearing sandrock clean gray shales	115	140	25	
Stratified gray and brown micaeous quartz iron pyrite snadrock	140	155	15	
Stratified, gray non water bearing sandrock and darker shades	155	160	5	
Dark stratified hard non water bearing stratum 161'-161'5", then dark sandrock & dark shales	160	165	5	
Light stratified very gray non water bearing stratum to 164' then thin dark sandrock & softer shales	165	180	15	
Light stratified flaky siliceous, cherty, igneous dark sandrock (Narrows drill)	180	185	5	
Light stratified softer water bearing sandrock	185	190	5	
Light stratified softer water bearing sandrock with thin gray shales	190	200	10	
			CONTINUED	

_____ inch diameter hole drilled by ☐ Cable Tool ☐ Rotary ☐ Jetting

Pipe left in hole

Date Started _____ Finished _____

_____

DRILLER

LAYNE-NORTHERN COMPANY

Incorporated

MISHAWAKA, INDIANA

well 8?

-3-

☐ TEST

☐ PERMANENT

Job No. _____

WELL LOG No. _____ CITY _____ County _____

Owner _____ Township _____

_____ Section _____

Location State _____

From Land Description _____ ft. East and _____ ft. North of SW Corner of Sectic

From Street or Road _____

FORMATION FOUND — DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Light stratified miceous water bearing stratified, almost solid and quite hard	200	225	25	
Dark stratified non water bearing fine grained sandrock	225	235	10	
Light micaeous slightly water bearing sandrock, thin sandrock & thin dark gray shales	235	250	15	
Light stratified micaeous water bearing at 258' water flowed constantly 2' 4"	250	260	10	
Dark stratified softer water bearing sandrock at 262' water flowed	260	265	5	
Dark stratified softer water bearing sandorck 282' (water flowed)	265	285	20	
Harder stratum, darker, non water bearing above lime rock	285	286	1	

_____ inch diameter hole drilled by ☐ Cable Tool ☐ Rotary ☐ Jetting

Pipe left in hole

Log copied from U.S.G.S. record August 1952

Date Started _____ Finished _____

F. E. Chapman

DRILLER

Layne NORTHERN COMPANY
INCORPORATED
INDIANAPOLIS • MISHAWAKA • LANSING

Well 9

☐ TEST
☒ PERMANENT THEIR 9

Job No. L-32068

WELL LOG No. OUR 1 CITY FOWLERVILLE County LIVINGSTON

Owner VILLAGE Township HANDY

Section Nonresponsive

Location State

From Land Description

From Street or Road Nonresponsive

FORMATION FOUND – DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Top soil	0	1	1	
Clay, brown	1	9	8	
Sand & gravel, brown	9	11	2	
Sand, brown	11	20	9	
Sand & Gravel	20	43	23	
Clay	43	59	16	
Gravel & broken sandstone	59	61	2	
Gravelly clay & stones	61	70	9	
Shale	70	75	5	
Limestone	75	83	8	
Sandstone & some shale	83	84	1	
Shale, dark	84	89	5	
Shale green	89	91	2	
Sandstone green	91	93	2	
Sandstone	93	102	9	
Shale	102	105	3	
Sandstone	105	154	49	
Shale soft	154	158	4	

Hole 20 x 16 "Dia Drilled by: Cable Tool ____ Rotary ____ Jetting ____
Reverse Circ. X Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement Yes Drilling Mud ____ Other ____

Casing 16 "OD From 30 "above ground to 82.5 feet below ground. Weight 61 Pounds per foot

Screen ____ " Set from ____ to ____ feet Make ____ Type ____ Slot ____

Pumping test 703 GPM drawdown to 110 feet after 24 hours pumping

Date Completed 7/30/68 Driller L.D. COONROD

Layne NORTHERN COMPANY
INCORPORATED
INDIANAPOLIS • MISHAWAKA • LANSING

Well 9

☐ TEST
☒ PERMANENT THEIR 9

Job No. L-32068

WELL LOG No. No. 1 CITY FOWLERVILLE County LIVINGSTON

Owner Township HARDY

Section Nonresponsive

Location State MICHIGAN

From Land Description

From Street or Road Nonresponsive

FORMATION FOUND — DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Shale	158	162	4	
Limestone	162	163	1	
Limestone & shale	163	164	1	
Sandstone, Hard	164	198	34	
Sandstone	198	218	20	
Sandstone, Hard	218	228	10	
Sandstone	228	248	20	
Sandstone Dark	248	250	2	
Sandstone & shale, dark	250	252	2	
Shale, dark	252	255	3	18'6"

Hole 20 x 16 Dia Drilled by: Cable Tool ____ Rotary ____ Jetting ____
Reverse Circ. X Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement X Drilling Mud ____ Other ____

Casing 16 "OD From 30 "above ground to 82.5 feet below ground. Weight 61 Pounds per foot

Screen ____ " Set from ____ to ____ feet Make ____ Type ____ Slot ____

Pumping test 703 GPM drawdown to 110 feet after 24 hours pumping

Date Completed 7/30/68 Driller L. D. COONROD

Layne NORTHERN COMPANY
INCORPORATED
INDIANAPOLIS • MISHAWAKA • LANSING

well 91

☐ TEST
☒ PERMANENT

Job No. LA-2133

WELL LOG No. 10 CITY Fowlerville County Livingston

Owner Village of Fowlerville, Michigan Township Handy

Section Nonresponsive

Location State Michigan

From Land Description Nonresponsive

From Street or Road

FORMATION FOUND – DESCRIBE FULLY	FROM NATURAL GROUND LEVE			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	St W Le
Top Soil	0	5'	5'	
Hard Brown Clay	5'	9'	4'	
Fine Sand with Fine Gravel	9'	15'	6'	
Sand	15'	32'	16'	
Sand with Small Gravel	32'	47'	15'	
Small to Medium Gravel	47'	53'	6'	
Gravel, Rocks, and Clay	53'	62'	9'	
Sandstone, Limestone, and Shale	62'	77'	15'	
Hard Limestone; Caprock	77'	82'	5'	
Sandstone, Limestone, and Shale	82'	97'	15'	
Sandstone and Limestone	97'	107'	10'	
Sandstone	107'	132'	25'	28
Sandstone with a little LImestone	132'	152'	20'	
Limestone, Shale, and Sandstone	152'	167'	15'	
Sandstone with little Limestone	167'	187'	20'	
Sandstone, Limestone, and Shale	187'	212'	25'	
Sandstone and Limestone	212'	217'	5'	
Sandstone, Limestone, and shale	217'	250'	33'	

Hole 15 "Dia Drilled by: { Cable Tool ____ Rotary ____ Jetting ____ / Reverse Circ. X Bucket ____ Auger ____ }

Rotary Hole Grouted: Neat Cement X Drilling Mud ____ Other ____

Casing 16 "OD From 30 "above ground to 105 feet below ground. Weight ____ Pounds per

Screen None Set from ____ to ____ feet Make ____ Type ____ Slot ____

Test after dynamiting and clean out

Pumping test 226 GPM drawdown to 152 feet after 8 hours pumping

11/7/84

Layne NORTHERN COMPANY
INCORPORATED
INDIANAPOLIS • MISHAWAKA • LANSING

Well 11?

☒ TEST
☐ PERMANENT

Job No. LA-1779

WELL LOG No. 83-A CITY Fowlerville County Livingston

Owner Village of Fowlerville Township Handy

Section Nonresponsive

Location [redacted] State Michigan

From Land Description [redacted]

From Street or Road [redacted]

Nonresponsive

Nonresponsive

FORMATION FOUND – DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Top Soil and Brown Clay	0	5	5	
Sand with Some Coal	5	35	30	
Sand with Some Small Gravel	35	45	10	
Small Gravel with Some Sand	45	55	10	
Small Gravel, Sand and Some Clay	55	70	15	
Gray Clay with Some Gravel	70	80	10	
Small Gravel and Sandstone	80	83	3	
Hard Broken Rock, Limestone and Sandstone	83	95	12	
Gray Shale with Some Limestone and Sandstone	95	105	10	
Sandstone and Soft Limestone	105	120	15	
White Sandstone and Limestone	120	155	35	
White Sandstone	155	165	10	25+
Gray Shale with Some Sandstone	165	175	10	
White Sandstone with Some Limestone and Shale	175	210	35	
Gray Sandstone with Some Limestone	210	230	20	
White Sandstone With some Limestone	230	250	20	
Blue Shale and Sandstone	250	265	15	
Shale with some Gray Sandstone	265	280	15	

Hole 7 7/8 "Dia Drilled by: { Cable Tool ____ Rotary X Jetting ____ / Reverse Circ. ____ Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement ____ Drilling Mud X Other ____

Casing 8 5/8 "OD From 24 "above ground to 128 feet below ground. Weight 29 Pounds per foot

Screen – " Set from No to Screen feet Make – Type – Slot –

Pumping test 131 GPM drawdown to 220+ feet after 1½ hours pumping

APPENDIX O

APPENDIX O

RED CEDAR RIVER REPORT, MDNR 1992

APPENDIX M

RED CEDAR RIVER REPORT, MDNR 1992

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DAMES & MOORE
CINCINNATI, OHIO

MI/DNR/SWQ-92-201

Michigan Department of Natural Resources
Surface Water Quality Division
January, 1992

Staff Report

A Biological Survey of the Red Cedar River, Livingston and Ingham Counties, Michigan June 24-28, 1991.

A biological survey was conducted on the Red Cedar River during June 24-28, 1991, by staff from the Great Lakes and Environmental Assessment Section. The objective of this survey was to document the effects on the biological, physical, and chemical parameters of land use practices, non point source discharges, and urban impacts to the river. In addition, sampling was done to assess the river's recovery from discharges from the old Hoover Ball and Bearing plant in Fowlerville as compared to past reports by Jackson (1971) and Saalfeld (1978). The Red Cedar River ranges from a first order stream at its headwaters in southern Livingston County to a fourth order river at its confluence with the Grand River in northeastern Ingham County. The watershed flows predominantly through agricultural and woodlands and bisects five urban areas including Fowlerville, Williamston, Okemos, East Lansing and Lansing. The entire watershed lies in the Southern Michigan Northern Indiana Till Plain Ecoregion.

Summary

1) Eighteen stations were sampled on the Red Cedar River and its tributaries, from the headwaters (Cedar Lake) in Livingston County to East Lansing, near the confluence with the Grand River (Ingham County). Figure 1 shows the approximate locations of all sampling sites. The tributaries sampled included two in Livingston County (the Middle Branch and the West Branch of the Red Cedar River) and four in Ingham County (Kalamink Creek, Wolf Creek, Squaw Creek, and Doan Creek). Sycamore Creek a major tributary in Ingham County, was not sampled due to recent extensive work (Clark 1989). Fish and macroinvertebrate populations were sampled and habitat assessed at all stations (Tables 1-18). Sediment and water chemistry samples were taken at selected sites (Tables 19 and 20).

2) The upstream sites (stations 1-4) included three sites on the main branch of the river and one on the Middle Branch, Red Cedar River. These sites ranged from poor to fair for macroinvertebrate communities. The habitat was poor at 3 out of 4 sites. Although fish populations were rated as good, limited diversity was apparent. Heavy silt loads from intense agricultural activities were the leading factors of degradation. Station 4 on the Middle Branch, was the worst location sampled with 2-4' of muck across the

entire stream.

3) Sampling stations 5-10 were evaluated to determine continuing impacts from the defunct Hoover Ball and Bearing plant in Fowlerville. Some initial improvements immediately downstream of the plant (station 6) were observed. The 1991 survey showed 19 taxa of macroinvertebrates and 9 fish taxa. Jackson (1971) found 10 macroinvertebrate taxa and Saalfeld (1979) found 17 macroinvertebrate taxa and 2 fish taxa. Further downstream at stations 7 and 8, the number of macroinvertebrate taxa were reduced and habitat was fair. Station 9 on the West Branch, Red Cedar River, showed good fish community diversity but was rated only fair for macroinvertebrates and the habitat, which was heavily impacted with silt, was poor. Downstream of Webberville at station 10, the river showed improvement with fish and macroinvertebrate taxa increasing. Habitat was greatly improved from fair to excellent. The stations downstream from Fowlerville that showed decreased macroinvertebrate diversity are most likely a result of continued downstream flushing of contaminated sediments. Improvements in fish communities downstream may be partially due to migration from degraded upstream sites. Ongoing cleanup at the Hoover site may also be periodically introducing contaminants to the river.

4) Four tributaries (stations 11-14) upstream of Williamston were sampled during the survey. Kalamink Creek (station 11) and Squaw Creek (station 13) were rated good. Both contained good numbers of macroinvertebrates and fish. Station 12 on Wolf Creek was poor, due to local farming practices. Excessive growths of filamentous algae, visible floating animal waste and an obvious lack of macroinvertebrates and fish indicated severe degradation. Doan Creek (station 14) was rated fair due to sediment loads and lack of habitat which reduced fish and macroinvertebrate numbers.

5) The downstream four sites were done in close proximity to urban areas. The Red Cedar River becomes a fourth order stream near station 15. The backwaters of the Williamston Dam (station 15) were pond like and supported more lacustrine species of macroinvertebrates and fish. The habitat was rated as poor with turbidity, little flow and increased water temperatures. Station 16 was approximately one quarter mile downstream of the Williamston WWTP, where excellent habitat produced good population numbers and diversity of fish and macroinvertebrates. The Okemos site (station 17) was moderately degraded, mainly from sand and some turbidity, but good stream depth and habitat produced a good diversity in macroinvertebrates and fish communities. The final sampling site (station 18) was just downstream of East Lansing. Areas of heavy sedimentation and urban debris were common. In addition high flow fluctuations and many combined sewer overflows were contributing to degraded conditions. Low numbers of fish and macroinvertebrate communities reflected the lack of habitat.

6) These survey results showed the Red Cedar River watershed varies in quality from poor to good. The main problems appear to be siltation in the upper reaches, past contamination from the

Hoover plant in Fowlerville, and localized impacts on some of the tributaries. The causes appear to be poor land use practices, channelization resulting in flow fluctuations, and urbanization in the form of debris and combined sewer overflows. Overall ratings for the Red Cedar River (Table 21) found fish communities were uniformly good, macroinvertebrates were fair, with more varied results, and habitat was mainly poor but varied greatly depending upon location.

7) Sediment sampling results indicated elevated levels of chromium, copper, lead, and zinc downstream of the Hoover plant (Table 19). Duplicate samples revealed extreme variability in sediment levels for these four parameters. Four sites (stations 10, 15-17) had additional sediment analyses done for Scan 3 parameters including polychlorinated biphenyls (PCB). The four stations showed elevated levels of several base neutrals, but no detectable levels of PCBs were observed at any of the locations.

8) Water samples were collected at all stations on the Red Cedar River. Results are given in Table 20. Elevated levels of ammonia (1.5 mg/l) were observed at one location, station 12, on Wolf Creek. Phosphorus was elevated (>0.1 mg/l) at seven of the eighteen stations. Wolf Creek again showed the highest level at 0.31 mg P/l. All other parameters tested including metals, were at detectable levels not exceeding Water Quality Standards.

Literature Cited

Jackson, G. 1971. Report on the Biological Conditions of the Red Cedar River as Affected by the Discharges from the Hoover Ball and Bearing Company, Utilex Division, Fowlerville, Michigan. MI DNR SWQ-01820.

Saalfeld, G. 1978. Biological Investigation of the Red Cedar River in the Vicinity of the Hoover, Universal-Utilix Division, Fowlerville, Michigan, Livingston County. MI DNR SWQ-03350.

Clark, K. 1989. A Biological Investigation of Sycamore Creek and Tributaries, Ingham County, Michigan, May-August 1989. MI DNR/SWQ-90-075.

MDNR 1981. Quality Assurance for Water and Sediment Sampling. Environmental Protection Bureau, Lansing, Michigan. Publication #3730-0028.

Field Work by: Mark Oemke, Aquatic Biologist
Andrew M. Scott, Aquatic Biologist
Chris Waggoner, Aquatic Biologist
Scott Sobiech, Student Aide

Report by: Andrew M. Scott
Water Quality Appraisal Unit
Great Lakes and Environmental Assessment Section

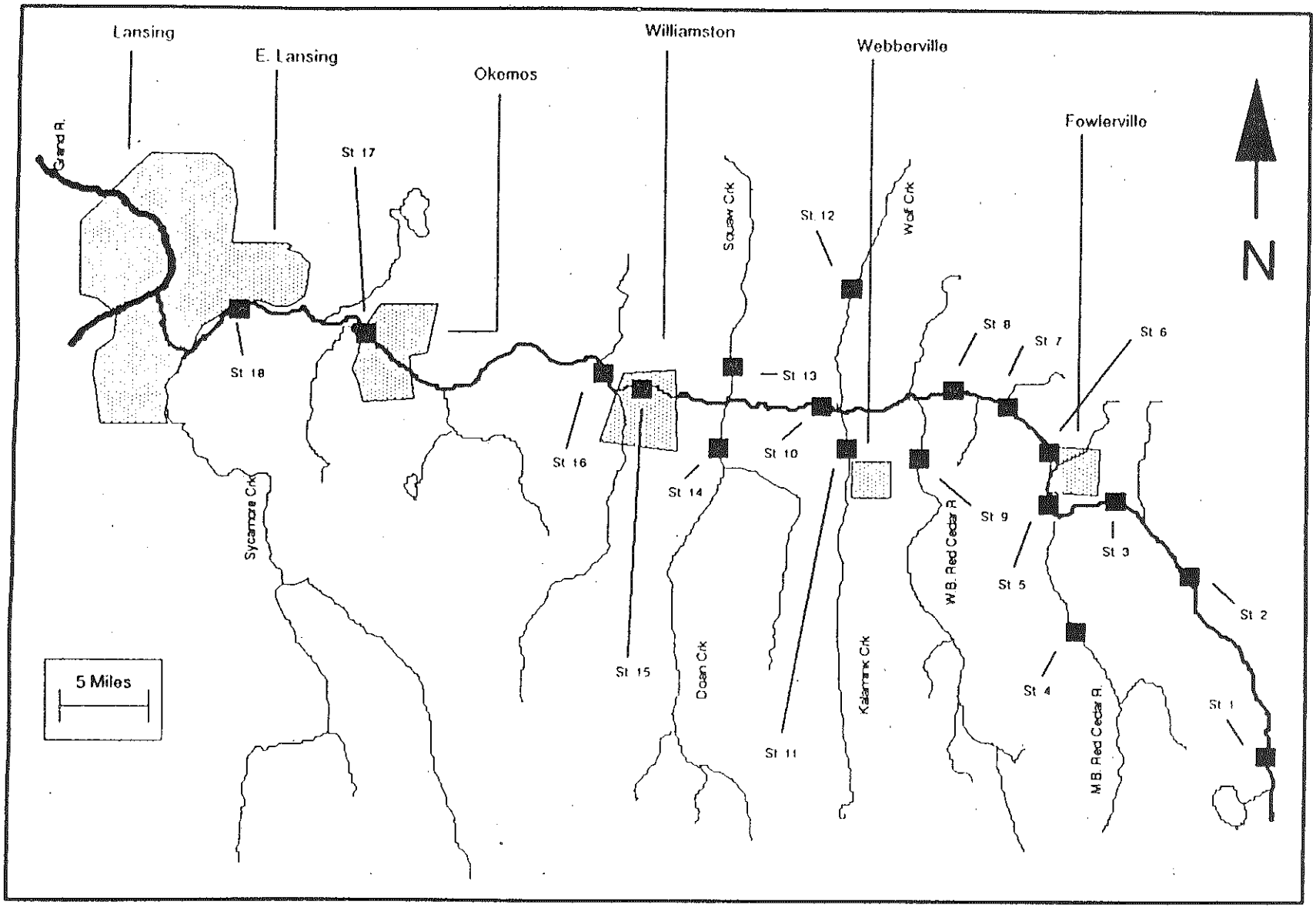

Figure 1. Sampling locations on the Red Cedar River, June 24-28, 1991.

Table 1A. Qualitative macroinvertebrate sampling results for Red Cedar River (1st Order), June 24-26, 1991.

TAXA	STATION 1	STATION 2	STATION 11	ST. 12
PLATYHELMINTHES (flatworms)			1	
ANNELIDA (segmented worms)				
Oligochaeta (worms)			1	12
Hirudinea (leeches)	1	1	2	10
ARTHROPODA				
Amphipoda (scuds)	30	25	15	
Decapoda (crayfish)	1	3	5	
Insecta				
Ephemeroptera (mayflies)				
Baetidae		1		
Heptageniidae			5	
Odonata				
Calopterygidae		1		
Lestidae			1	
Coenagrionidae			1	
Aeshnidae		2	2	
Libellulidae		1		
Hemiptera (true bugs)				
Belostomatidae				
Belastoma	2			
Nepidae	1			
Corixidae	20		5	1
Notonectidae	5			
Gerridae	5	4	2	
Hydropsychidae		1	5	
Macronema			1	
Hydroptilidae		5		
Limnephilidae	1	8	2	
Leptoceridae		1		
Coleoptera (beetles)				
Gyrinidae (adults)				1
Haliplidae (adults)	5		5	
Dytiscidae (total)	7			
Hydrophilidae (total)	3	4		
Psephenidae (adults)			1	
Elmidae		1	5	
Diptera (flies)				
Tipulidae			1	
Simulidae		10	1	3
Ceratopogonidae			1	
Chironomidae	8			20
Rheotanytarsus		8	3	
Syrphidae		1		1
MOLLUSCA				
Gastropoda (snails)				
Physa			20	15
Pelecypoda (clams)				
Pisidium	1	1	10	
TOTAL INDIVIDUALS	90	78	95	63

Table 1B. Macroinvertebrate metric evaluation of Red Cedar River (1st Order), June 24-26, 1991.

METRIC	STATION 1 Value	STATION 1 Score	STATION 2 Value	STATION 2 Score	STATION 11 Value	STATION 11 Score	STATION 12 Value	STATION 12 Score
TOTAL NUMBER OF TAXA	14	2	20.0	4	23.0	4	8.0	0
NUMBER OF MAYFLY TAXA	0	0	2.0	4	1.0	2	0.0	0
NUMBER OF CADDISFLY TAXA	1	0	4	4	3	4	0	0
NUMBER OF STONEFLY TAXA	0	0	0	0	0	0	0	0
PERCENT MAYFLY COMP.	0.0	0	1.3	0	5.3	0	0.0	0
PERCENT CADDISFLY COMP.	1.1	0	19.2	2	8.4	0	0.0	0
PERCENT CONTR. DOM. TAXON	33.3	2	32.1	2	21.1	4	31.7	2
PERCENT ISOPOD, SNAIL, LEECH	1.1	4	1.3	4	23.2	0	39.7	0
PERCENT SURFACE AIR BREATHERS	53.3	0	11.5	4	13.7	4	4.8	6
TOTAL SCORE		8		24		18		8
MACROINVERTEBRATE COMMUNITY CATEGORY		POOR (SEVERELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)		POOR (SEVERELY IMPAIRED)

Table 2A. Qualitative macroinvertebrate sampling results for Red Cedar River (1st Order), June 26, 1991.

TAXA	STATION 13
ANNELIDA (segmented worms)	
Oligochaeta (worms)	1
Hirudinea (leeches)	2
ARTHROPODA	
Amphipoda (scuds)	60
Decapoda (crayfish)	2
Arachnoidea	
Insecta	
Ephemeroptera (mayflies)	
Baetiscidae	1
Odonata	
Coenagrionidae	2
Aeshnidae	1
Plecoptera (stoneflies)	
Hemiptera (true bugs)	
Belostomatidae	
Corixidae	3
Gerridae	3
Megaloptera	
Neuroptera (spongilla flies)	
Trichoptera (caddisflies)	
Hydropsychidae	6
Limnephilidae	2
Lepidoptera (moths)	
Coleoptera (beetles)	
Elmidae	1
Diptera (flies)	
Ceratopogonidae	1
Chironomidae	10
MOLLUSCA	
Gastropoda (snails)	
Pelecypoda (clams)	
TOTAL INDIVIDUALS	95

Table 2B. Macroinvertebrate metric evaluation of Red Cedar River (1st Order), June 26, 1991.

METRIC	STATION 13 Value	Score
TOTAL NUMBER OF TAXA	14	2
NUMBER OF MAYFLY TAXA	1	2
NUMBER OF CADDISFLY TAXA	2	2
NUMBER OF STONEFLY TAXA	0	0
PERCENT MAYFLY COMP.	1.1	0
PERCENT CADDISFLY COMP.	8.4	0
PERCENT CONTR. DOM. TAXON	63.2	0
PERCENT ISOPOD, SNAIL, LEECH	2.1	4
PERCENT SURFACE AIR BREATHERS	6.3	4
TOTAL SCORE		14
MACROINVERTEBRATE COMMUNITY CATEGORY		FAIR (MODERATELY IMPAIRED)

Table 3A. Qualitative macroinvertebrate sampling results for Red Cedar River (2nd Order), June 24-27, 1991.

TAXA	STATION 3	STATION 4	STATION 14
ANNELIDA (segmented worms)			
Hirudinea (leeches)	1		
ARTHROPODA			
Isopoda (sowbugs)	1		50
Amphipoda (scuds)	20	20	
Decapoda (crayfish)	1	4	15
Arachnoidea			
Insecta			
Ephemeroptera (mayflies)			
Heptageniidae	1		
Odonata			
Calopterygidae	1	4	
Lestidae	3	7	
Coenagrionidae	1		
Aeshnidae	1		
Plecoptera (stoneflies)			
Hemiptera (true bugs)			
Belostomatidae			
Belastoma	1		
Corixidae		3	
Notonectidae	1		1
Gerridae	3	3	10
Megaloptera			
Sialis sp.		2	1
Neuroptera (spongilla flies)			
Trichoptera (caddisflies)			
Hydropsychidae			6
Limnephilidae	5	2	10
Leptoceridae		1	3
Lepidoptera (moths)			
Coleoptera (beetles)			
Gyrinidae (adults)	2		
Haliplidae (adults)		3	
Dytiscidae (total)	3		
Noteridae (adults)		13	
Chrysomelidae (adults)		5	
Elmidae	15	3	
Diptera (flies)			
Simulidae		2	15
Ceratopogonidae			12
Chironomidae	5	2	
Rheotanytarsus	10		
MOLLUSCA			
Gastropoda (snails)			
Helisoma			5
Physa	5		
Pelecypoda (clams)			
Pisidium			2
TOTAL INDIVIDUALS	80	74	130

Table 3B. Macroinvertebrate metric evaluation of Red Cedar River (2nd Order), June 24-27, 1991.

METRIC	STATION 3 Value	STATION 3 Score	STATION 4 Value	STATION 4 Score	STATION 14 Value	STATION 14 Score
TOTAL NUMBER OF TAXA	19	4	15.0	4	12.0	2
NUMBER OF MAYFLY TAXA	1	0	0.0	0	0.0	0
NUMBER OF CADDISFLY TAXA	1	0	2	2	3	4
NUMBER OF STONEFLY TAXA	0	0	0	0	0	0
PERCENT MAYFLY COMP.	1.3	0	0.0	0	0.0	0
PERCENT CADDISFLY COMP.	6.3	0	4.1	0	14.6	0
PERCENT CONTR. DOM. TAXON	25.0	4	27.0	4	38.5	2
PERCENT ISOPOD, SNAIL, LEECH	8.8	0	0.0	6	42.3	0
PERCENT SURFACE AIR BREATHERS	12.5	4	36.5	2	8.5	4
TOTAL SCORE		12		18		12
MACROINVERTEBRATE COMMUNITY CATEGORY		FAIR (MODERATELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)

Table 4A. Qualitative macroinvertebrate sampling results for Red Cedar River (3rd Order), June 25-26, 1991.

TAXA	STATION 5	STATION 6	STATION 7	STATION 8
PORIFERA (sponges)	1			
PLATYHELMINTHES (flatworms)	1	2		
ANNELIDA (segmented worms)				
Hirudinea (leeches)		2	3	
ARTHROPODA				
Amphipoda (scuds)	13	3	30	30
Decapoda (crayfish)	2	6		3
Insecta				
Ephemeroptera (mayflies)				
Heptageniidae	8	7	3	
Odonata				
Calopterygidae	6	5	3	
Lestidae	2		5	1
Aeshnidae		1		
Hemiptera (true bugs)				
Belostomatidae				
Belastoma	2	6	2	1
Nepidae	3		1	
Corixidae	20		7	1
Notonectidae				1
Gerridae	1	3	4	3
Megaloptera				
Sialis sp.	2	1	1	
Hydropsychidae	4	6		1
Limnephilidae		5	3	
Coleoptera (beetles)				
Gyrinidae (adults)	1	5	1	
Haliplidae (adults)	1	2		1
Dytiscidae (total)	15	1	2	4
Elmidae	23	5	4	13
Chironomidae	3	3		1
Rheotanytarsus	2			
Tabanidae	1			
MOLLUSCA				
Gastropoda (snails)				
Limnea		7		
Physa		3		5
Pelecypoda (clams)				
TOTAL INDIVIDUALS	111	73	69	65

Table 4B. Macroinvertebrate metric evaluation of Red Cedar River (3rd Order), June 25-26, 1991.

METRIC	STATION 5 Value	STATION 5 Score	STATION 6 Value	STATION 6 Score	STATION 7 Value	STATION 7 Score	STATION 8 Value	STATION 8 Score
TOTAL NUMBER OF TAXA	21	6	19.0	6	14.0	4	13.0	4
NUMBER OF MAYFLY TAXA	1	2	1.0	2	1.0	2	0.0	0
NUMBER OF CADDISFLY TAXA	1	2	2	4	1	2	1	2
NUMBER OF STONEFLY TAXA	0	0	0	0	0	0	0	0
PERCENT MAYFLY COMP.	7.2	0	9.6	0	4.3	0	0.0	0
PERCENT CADDISFLY COMP.	3.6	0	15.1	6	4.3	0	1.5	0
PERCENT CONTR. DOM. TAXON	20.7	4	9.6	6	43.5	0	46.2	0
PERCENT ISOPOD, SNAIL, LEECH	0.0	6	16.4	0	4.3	2	7.7	0
PERCENT SURFACE AIR BREATHERS	38.7	2	23.3	2	24.6	2	16.9	4
TOTAL SCORE		22		26		12		10
MACROINVERTEBRATE COMMUNITY CATEGORY	FAIR (MODERATELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)	

Table 5A. Qualitative macroinvertebrate sampling results for Red Cedar River (3rd Order), June 26, 1991.

TAXA	STATION 9
ANNELIDA (segmented worms)	
Oligochaeta (worms)	3
Hirudinea (leeches)	2
ARTHROPODA	
Amphipoda (scuds)	40
Decapoda (crayfish)	4
Insecta	
Ephemeroptera (mayflies)	
Heptageniidae	7
Ephemeridae	2
Odonata	
Lestidae	1
Coenagrionidae	2
Hemiptera (true bugs)	
Belostomatidae	
Corixidae	2
Gerridae	2
Megaloptera	
Sialis sp.	8
Coleoptera (beetles)	
Gyrinidae (adults)	1
Dytiscidae (total)	3
Elmidae	3
Diptera (flies)	
Ceratopogonidae	2
TOTAL INDIVIDUALS	87

Table 5B. Macroinvertebrate metric evaluation of Red Cedar River (3rd Order), June 26, 1991.

METRIC	STATION 9 Value	Score
TOTAL NUMBER OF TAXA	16	4
NUMBER OF MAYFLY TAXA	2	4
NUMBER OF CADDISFLY TAXA	0	0
NUMBER OF STONEFLY TAXA	0	0
PERCENT MAYFLY COMP.	10.3	0
PERCENT CADDISFLY COMP.	0.0	0
PERCENT CONTR. DOM. TAXON	46.0	0
PERCENT ISOPOD, SNAIL, LEECH	2.3	4
PERCENT SURFACE AIR BREATHERS	9.2	4
TOTAL SCORE		16
MACROINVERTEBRATE COMMUNITY CATEGORY	FAIR (MODERATELY IMPAIRED)	

Table 6A. Qualitative macroinvertebrate sampling results for Red Cedar River (4th Order), June 26-28, 1991.

TAXA	STATION 10	STATION 15	STATION 16	ST. 17
PLATYHELMINTHES (flatworms)	1	6		
ANNELIDA (segmented worms)				
Hirudinea (leeches)		2	2	
ARTHROPODA				
Isopoda (sowbugs)				10
Amphipoda (scuds)	12	17	12	15
Decapoda (crayfish)	2		15	5
Insecta				
Ephemeroptera (mayflies)				
Siphlonuridae				8
Baetidae	3		3	2
Heptageniidae	6		7	10
Ephemerellidae				1
Caenidae				1
Ephemeridae		4	8	1
Odonata				
Calopterygidae	1			1
Lestidae	1	4	1	
Coenagrionidae	1			
Plecoptera (stoneflies)				
Perlodidae		1	1	
Hemiptera (true bugs)				
Belostomatidae				
Belastoma	1	1		
Nepidae		1		
Corixidae	10	4	1	
Gerridae	1	2	3	5
Mesoveliidae			15	
Megaloptera				
Sialis sp.			5	1
Trichoptera (caddisflies)				
Philopotamidae	2			
Polycentropodidae			7	
Hydropsychidae	11	4	10	15
Limnephilidae	5		32	5
Helicopsychidae				3
Coleoptera (beetles)				
Gyrinidae (adults)	3	2		
Haliplidae (adults)		3		
Dytiscidae (total)		3		
Hydrophilidae (total)		4		
Psephenidae (adults)				2
Dryopidae			1	
Elmidae	5	3		20
Diptera (flies)				
Simulidae	15		3	
Ceratopogonidae	1			
MOLLUSCA				
Gastropoda (snails)				
Campeloma			2	
Physa	1	3	6	1
Pelecypoda (clams)				
Pisidium				3
TOTAL INDIVIDUALS	82	65	134	112

Table 6B. Macroinvertebrate metric evaluation of Red Cedar River (4th Order), June 26-28, 1991.

METRIC	STATION 10		STATION 15		STATION 16		STATION 17	
	Value	Score	Value	Score	Value	Score	Value	Score
TOTAL NUMBER OF TAXA	19	6	18.0	6	21.0	6	20.0	6
NUMBER OF MAYFLY TAXA	2	4	1.0	2	3.0	6	6.0	6
NUMBER OF CADDISFLY TAXA	3	4	1	0	3	4	3	4
NUMBER OF STONEFLY TAXA	0	0	1	6	1	6	0	0
PERCENT MAYFLY COMP.	11.0	0	6.2	0	11.4	0	20.5	4
PERCENT CADDISFLY COMP.	22.0	0	6.2	0	31.0	2	20.5	0
PERCENT CONTR. DOM. TAXON	18.3	6	26.2	4	20.3	4	17.9	6
PERCENT ISOPOD, SNAIL, LEECH	1.2	4	7.7	0	6.3	0	9.8	0
PERCENT SURFACE AIR BREATHERS	18.3	4	30.8	2	12.0	4	6.3	4
TOTAL SCORE		28		20		32		30
MACROINVERTEBRATE COMMUNITY CATEGORY	FAIR (MODERATELY IMPAIRED)		FAIR (MODERATELY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)	

Table 7A. Qualitative macroinvertebrate sampling results for Red Cedar River (4th Order), June 28, 1991.

TAXA	STATION 18
BRYOZOA (moss worms)	1
ARTHROPODA	
Isopoda (sowbugs)	8
Amphipoda (scuds)	5
Decapoda (crayfish)	11
Insecta	
Ephemeroptera (mayflies)	
Baetidae	3
Heptageniidae	9
Ephemerellidae	1
Hemiptera (true bugs)	
Belostomatidae	
Corixidae	3
Gerridae	3
Hydropsychidae	3
Limnephilidae	16
Helicopsychidae	1
Leptoceridae	1
Coleoptera (beetles)	
Gyrinidae (adults)	10
Elmidae	3
Chironomidae	10
Rheotanytarsus	20
Pelecypoda (clams)	
Sphaerium	1
TOTAL INDIVIDUALS	109

Table 7B. Macroinvertebrate metric evaluation of Red Cedar River (4th Order), June 28, 1991.

METRIC	STATION 18 Value	Score
TOTAL NUMBER OF TAXA	18	6
NUMBER OF MAYFLY TAXA	3	6
NUMBER OF CADDISFLY TAXA	4	6
NUMBER OF STONEFLY TAXA	0	0
PERCENT MAYFLY COMP.	11.9	0
PERCENT CADDISFLY COMP.	19.3	0
PERCENT CONTR. DOM. TAXON	18.3	6
PERCENT ISOPOD, SNAIL, LEECH	7.3	0
PERCENT SURFACE AIR BREATHERS	14.7	4
TOTAL SCORE		28
MACROINVERTEBRATE COMMUNITY CATEGORY		FAIR (MODERATELY IMPAIRED)

Table 8A. Qualitative fish sampling results for Red Cedar River (1st Order), June 24, 1991.

TAXA	STATION 1	STATION 2	STATION 11	ST. 12
Umbridae (Mudminnows)				
Umbra limi (Central mudminnow)	14	1	3	15
Esocidae (Pikes)				
Esox americanus ver. (Grass Pike)	7			
E. niger (Chain pickerel)			1	
Cyprinidae (Minnows and Carps)				
Semotilus atromaculatus (Creek)		14		
N. cornutus (Common shiner)	8		13	
N. heterolepis (Blacknose shiner)	1			
P. notatus (Bluntnose minnow)		3	2	
Catostomidae (Suckers)				
Catostomus commersoni (W. sucker)		7	17	8
Ictaluridae (Bullhead, Catfish)				
Ictalurus melas (Black bullhead)			1	
Gasterosteidae (Sticklebacks)				
Culaea inconstans (Brook)				5
Centrarchidae (Sunfish)				
Ambloplites rupestris (Rock bass)			1	
Lepomis cyanellus (Green sunfish)	7		7	1
L. macrochirus (Bluegill)	7	1	14	2
P. nigromaculatus (Black crappie)			1	
Lepomis megalotus (Longear s.)			2	
Micropterus salmoides (Lm. bass)	1		5	
Percidae (Perches)				
E. nigrum (Johnny darter)	4	10	36	
Percina maculata (Blackside dar.)		3		
TOTAL INDIVIDUALS	49	39	103	31
NUMBER OF ANOMALIES	0	0	0	0
SQUARE FOOT SAMPLED	2625	2200	1620	1980
DENSITY OF INDIVIDUALS (#/SF)	0.019	0.018	0.064	0.016

Table 8B. Fish metric evaluation of Red Cedar River (1st Order), June 24, 1991.

METRIC	STATION 1 Value	STATION 1 Score	STATION 2 Value	STATION 2 Score	STATION 11 Value	STATION 11 Score	STATION 12 Value	STATION 12 Score
TOTAL NUMBER OF TAXA	8	3	7	3	15	5	5	3
NUMBER OF DARTER SPECIES	1	3	2	5	1	3	0	1
NUMBER OF SUNFISH SPECIES	2	3	1	3	6	5	2	3
NUMBER OF SUCKER SPECIES	0	1	1	3	1	3	1	3
PERCENT CARP, G.SUNFISH, W.SUCKER	14.3	3	17.9	3	23.3	3	29.0	1
PERCENT OMNIVORES	0.0	5	25.6	3	18.4	5	25.8	3
PERCENT INSECTIVO. CYPRINIDS	18.4	1	0.0	1	12.6	1	0.0	1
PERCENT PISCIVORES	16.3	5	0.0	1	6.8	5	0.0	1
DENSITY OF INDIVIDUALS	0.019	3	0.018	3	0.064	5	0.016	3
PERCENT ANOMALIES	0.0	5	0.0	5	0.0	5	0.0	5
TOTAL SCORE		32		30		40		24
FISH COMMUNITY CATEGORY		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		FAIR (MODERATELY IMPAIRED)

Table 9A. Qualitative fish sampling results for Red Cedar River (1st Order), June 26, 1991.

TAXA	STATION 13
Umbridae (Mudminnows)	
Umbra limi (Central mudminnow)	11
Esocidae (Pikes)	
E. lucius (Northern Pike)	1
Cyprinidae (Minnows and Carps)	
P. notatus (Bluntnose minnow)	2
Rhinichthys atratulus (Blacknose)	2
Catostomidae (Suckers)	
Catostomus commersoni (W. sucker)	5
Gasterosteidae (Sticklebacks)	
Culaea inconstans (Brook)	5
Centrarchidae (Sunfish)	
Lepomis cyanellus (Green sunfish)	6
L. macrochirus (Bluegill)	1
Micropterus salmoides (Lm. bass)	1
Percidae (Perches)	
E. nigrum (Johnny darter)	45
TOTAL INDIVIDUALS	79
NUMBER OF ANOMALIES	0
SQUARE FOOT SAMPLED	1400
DENSITY OF INDIVIDUALS (#/SF)	0.056

Table 9B. Fish metric evaluation of Red Cedar River (1st Order), June 26, 1991.

METRIC	STATION 13 Value	Score
TOTAL NUMBER OF TAXA	10	3
NUMBER OF DARTER SPECIES	1	3
NUMBER OF SUNFISH SPECIES	2	3
NUMBER OF SUCKER SPECIES	1	3
PERCENT CARP, G.SUNFISH, W.SUCKER	13.9	3
PERCENT OMNIVORES	8.9	5
PERCENT INSECTIVO. CYPRINIDS	0.0	1
PERCENT PISCIVORES	2.5	3
DENSITY OF INDIVIDUALS	0.056	5
PERCENT ANOMALIES	0.0	5
TOTAL SCORE		34
FISH COMMUNITY CATEGORY		GOOD (SLIGHTLY IMPAIRED)

Table 10A. Qualitative fish sampling results for Red Cedar River (2nd Order), June 24, 1991.

TAXA	STATION 3	STATION 4	STATION 14
Umbridae (Mudminnows)			
Umbra limi (Central mudminnow)	45	41	
Esocidae (Pikes)			
E. lucius (Northern Pike)	3		
Cyprinidae (Minnows and Carps)			
N. cornutus (Common shiner)	2		1
P. notatus (Bluntnose minnow)		3	13
Catostomidae (Suckers)			
Catostomus commersoni (W. sucker)	5	1	3
Minytrema melanops (Spot. sucker)	1	1	
Ictaluridae (Bullhead, Catfish)			
N. gyrinus (Tadpole madtom)	2		
Gasterosteidae (Sticklebacks)			
Culaea inconstans (Brook)	1		
Centrarchidae (Sunfish)			
Ambloplites rupestris (Rock bass)	3	1	
Lepomis cyanellus (Green sunfish)		10	1
Percidae (Perches)			
E. nigrum (Johnny darter)	25	1	25
Percina maculata (Blackside dar.)	7		10
TOTAL INDIVIDUALS	94	58	53
NUMBER OF ANOMALIES	0	0	0
SQUARE FOOT SAMPLED	3600	1200	8000
DENSITY OF INDIVIDUALS (#/SF)	0.026	0.048	0.007

Table 10B. Fish metric evaluation of Red Cedar River (2nd Order), June 27, 1991.

METRIC	STATION 3 Value	STATION 3 Score	STATION 4 Value	STATION 4 Score	STATION 14 Value	STATION 14 Score
TOTAL NUMBER OF TAXA	10	3	7	3	6	1
NUMBER OF DARTER SPECIES	2	3	1	1	2	3
NUMBER OF SUNFISH SPECIES	1	1	2	3	1	1
NUMBER OF SUCKER SPECIES	2	5	2	5	1	3
PERCENT CARP, G.SUNFISH, W.SUCKER	5.3	5	19.0	3	7.5	5
PERCENT OMNIVORES	6.4	5	8.6	5	30.2	3
PERCENT INSECTIVO. CYPRINIDS	2.1	1	0.0	1	1.9	1
PERCENT PISCIVORES	6.4	5	1.7	3	0.0	1
DENSITY OF INDIVIDUALS	0.026	5	0.048	5	0.007	3
PERCENT ANOMALIES	0.0	5	0.0	5	0.0	5
TOTAL SCORE		38		34		26
FISH COMMUNITY CATEGORY		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		FAIR (MODERATELY IMPAIRED)

Table 11A. Qualitative fish sampling results for Red Cedar River (3rd Order), June 25, 1991.

TAXA	STATION 5	STATION 6	STATION 7	STATION 8
Umbridae (Mudminnows)				
Umbra limi (Central mudminnow)	15	4	8	3
Esocidae (Pikes)				
E. lucius (Northern Pike)	2	1	1	
Cyprinidae (Minnows and Carps)				
Cyprinus carpio (Carp)	1		1	
P. notatus (Bluntnose minnow)	4	7		3
Catostomidae (Suckers)				
Catostomus commersoni (W. sucker)		3	4	3
Ictaluridae (Bullhead, Catfish)				
Ictalurus melas (Black bullhead)				1
I. nebulosus (Brown bullhead)			1	
N. gyrinus (Tadpole madtom)	1			
Gasterosteidae (Sticklebacks)				
Culaea inconstans (Brook)				1
Centrarchidae (Sunfish)				
Ambloplites rupestris (Rock bass)	4	2		
Lepomis cyanellus (Green sunfish)	5		1	
L. gibbosus (Pumpkinseed)	1	2		
L. macrochirus (Bluegill)	1	1	3	
Lepomis megalotis (Longear s.)			2	
Micropterus salmoides (Lm. bass)			1	
Percidae (Perches)				
E. nigrum (Johnny darter)	5	3	1	16
Percina maculata (Blackside dar.)	8	1		9
TOTAL INDIVIDUALS	47	24	23	36
NUMBER OF ANOMALIES	0	0	0	0
SQUARE FOOT SAMPLED	13750	16500	10000	21000
DENSITY OF INDIVIDUALS (#/SF)	0.003	0.001	0.002	0.002

Table 11B. Fish metric evaluation of Red Cedar River (3rd Order), June 25, 1991.

METRIC	STATION 5 Value	STATION 5 Score	STATION 6 Value	STATION 6 Score	STATION 7 Value	STATION 7 Score	STATION 8 Value	STATION 8 Score
TOTAL NUMBER OF TAXA	11	5	9	3	10	5	7	3
NUMBER OF DARTER SPECIES	2	5	2	5	1	3	2	5
NUMBER OF SUNFISH SPECIES	4	5	3	5	3	5	0	1
NUMBER OF SUCKER SPECIES	0	1	1	3	1	3	1	3
PERCENT CARP, G.SUNFISH, W.SUCKER	12.8	3	12.5	3	26.1	1	8.3	5
PERCENT OMNIVORES	10.6	5	41.7	3	21.7	3	16.7	5
PERCENT INSECTIVO. CYPRINIDS	0.0	1	0.0	1	0.0	1	0.0	1
PERCENT PISCIVORES	12.8	5	12.5	5	8.7	5	0.0	1
DENSITY OF INDIVIDUALS	0.003	1	0.001	1	0.002	1	0.002	1
PERCENT ANOMALIES	0.0	5	0.0	5	0.0	5	0.0	5
TOTAL SCORE		36		34		32		30
FISH COMMUNITY CATEGORY		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)

Table 12A. Qualitative fish sampling results for Red Cedar River (3rd Order), June 26, 1991.

TAXA	STATION 9
Cyprinidae (Minnows and Carps)	
Cyprinus carpio (Carp)	3
N. cornutus (Common shiner)	3
P. notatus (Bluntnose minnow)	4
Catostomidae (Suckers)	
Catostomus commersoni (W. sucker)	10
Ictaluridae (Bullhead, Catfish)	
Ictalurus melas (Black bullhead)	1
Centrarchidae (Sunfish)	
Ambloplites rupestris (Rock bass)	6
Lepomis cyanellus (Green sunfish)	6
Lepomis megalotis (Longear s.)	2
Percidae (Perches)	
E. nigrum (Johnny darter)	1
Percina maculata (Blackside dar.)	2
Perca flavescens (Yellow perch)	3
TOTAL INDIVIDUALS	41
NUMBER OF ANOMALIES	0
SQUARE FOOT SAMPLED	6300
DENSITY OF INDIVIDUALS (#/SF)	0.007

Table 12B. Fish metric evaluation of Red Cedar River (3rd Order), June 26, 1991.

METRIC	STATION 9 Value	Score
TOTAL NUMBER OF TAXA	11	5
NUMBER OF DARTER SPECIES	2	5
NUMBER OF SUNFISH SPECIES	3	5
NUMBER OF SUCKER SPECIES	1	3
PERCENT CARP, G.SUNFISH, W.SUCKER	46.3	1
PERCENT OMNIVORES	41.5	3
PERCENT INSECTIVO. CYPRINIDS	7.3	1
PERCENT PISCIVORES	22.0	5
DENSITY OF INDIVIDUALS	0.007	1
PERCENT ANOMALIES	0.0	5
TOTAL SCORE		34
FISH COMMUNITY CATEGORY		GOOD (SLIGHTLY IMPAIRED)

Table 13A. Qualitative fish sampling results for Red Cedar River (4th Order), June 27-28, 1991.

TAXA	STATION 10	STATION 15	STATION 16	ST. 18
Petromyzontidae (Lampreys)				
L. castaneus (Chestnut)			1	
Umbridae (Mudminnows)				
Umbra limi (Central mudminnow)		1		
Esocidae (Pikes)				
Esox americanus ver. (Grass Pike)	1			
Cyprinidae (Minnows and Carps)				
Cyprinus carpio (Carp)	5	1		
Nocomis biguttatus (Horneyhead)			3	
N. cornutus (Common shiner)	1		1	
Pimephales promelas (Fathead mi.)			4	
P. notatus (Bluntnose minnow)		53	7	
Catostomidae (Suckers)				
Catostomus commersoni (W. sucker)	2			6
Moxostoma anisurum (Silver redh.)			2	
M. erthrurum (Golden redhorse)				2
Minytrema melanops (Spot. sucker)		2		
Ictaluridae (Bullhead, Catfish)				
I. natalis (Yellow bullhead)				1
N. gyrinus (Tadpole madtom)	1			
Gasterosteidae (Sticklebacks)				
Culaea inconstans (Brook)		2		
Centrarchidae (Sunfish)				
Ambloplites rupestris (Rock bass)	5		6	3
Lepomis cyanellus (Green sunfish)		6		4
L. macrochirus (Bluegill)	2	1	2	
Lepomis megalotis (Longear sunfish)		4		
Micropterus salmoides (Lm. bass)	1			
M. dolomieui (Smallmouth bass)			2	3
Percidae (Perches)				
Etheostoma caeruleum (Rainbow d.)			17	
E. nigrum (Johnny darter)	6	4	1	
Percina maculata (Blackside dar.)	5	2	4	
Stizostedion vitreum v. (Walleye)			1	
TOTAL INDIVIDUALS	29	76	51	19
NUMBER OF ANOMALIES	0	0	0	1
SQUARE FOOT SAMPLED	18500	9750	14600	15000
DENSITY OF INDIVIDUALS (#/SF)	0.002	0.008	0.003	0.001

Table 13B. Fish metric evaluation of Red Cedar River (4th Order), June 27-28, 1991.

METRIC	STATION 10 Value	STATION 10 Score	STATION 15 Value	STATION 15 Score	STATION 16 Value	STATION 16 Score	STATION 18 Value	STATION 18 Score
TOTAL NUMBER OF TAXA	12	5	10	5	13	5	6	5
NUMBER OF DARTER SPECIES	2	5	2	5	3	5	0	1
NUMBER OF SUNFISH SPECIES	2	5	3	5	2	5	2	5
NUMBER OF SUCKER SPECIES	2	5	1	3	1	3	2	5
PERCENT CARP, G.SUNFISH, W.SUCKER	24.1	3	9.2	5	0.0	5	52.6	1
PERCENT OMNIVORES	24.1	3	71.1	1	23.5	3	31.6	3
PERCENT INSECTIVO. CYPRINIDS	3.4	1	0.0	1	7.8	1	0.0	1
PERCENT PISCIVORES	24.1	5	0.0	1	17.6	5	31.6	5
DENSITY OF INDIVIDUALS	0.002	1	0.008	1	0.003	1	0.001	1
PERCENT ANOMALIES	0.0	5	0.0	5	0.0	5	5.3	1
TOTAL SCORE		38		32		38		28
FISH COMMUNITY CATEGORY		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)		GOOD (SLIGHTLY IMPAIRED)

Table 14A. Qualitative fish sampling results for Red Cedar River (4th Order), June 21, 1991.

TAXA	STATION 17
Cyprinidae (Minnows and Carps)	
Semotilus atromaculatus (Creek)	8
N. cornutus (Common shiner)	1
P. notatus (Bluntnose minnow)	2
Catostomidae (Suckers)	
Catostomus commersoni (W. sucker)	2
Hypentelium nigricans (N. hogsu.)	5
Ictaluridae (Bullhead, Catfish)	
I. nebulosus (Brown bullhead)	1
Centrarchidae (Sunfish)	
Ambloplites rupestris (Rock bass)	15
Lepomis cyanellus (Green sunfish)	2
L. gibbosus (Pumpkinseed)	1
L. macrochirus (Bluegill)	1
M. dolomieui (Smallmouth bass)	1
Percidae (Perches)	
Etheostoma caeruleum (Rainbow d.)	20
E. nigrum (Johnny darter)	3
Percina maculata (Blackside dar.)	1
TOTAL INDIVIDUALS	63
NUMBER OF ANOMALIES	1
SQUARE FOOT SAMPLED	18540
DENSITY OF INDIVIDUALS (#/SF)	0.003

Table 14B. Fish metric evaluation of Red Cedar River (4th Order), June 21, 1991.

METRIC	STATION 17 Value	Score
TOTAL NUMBER OF TAXA	14	5
NUMBER OF DARTER SPECIES	3	5
NUMBER OF SUNFISH SPECIES	4	5
NUMBER OF SUCKER SPECIES	2	5
PERCENT CARP, G.SUNFISH, W.SUCKER	6.3	5
PERCENT OMNIVORES	6.3	5
PERCENT INSECTIVO. CYPRINIDS	1.6	1
PERCENT PISCIVORES	25.4	5
DENSITY OF INDIVIDUALS	0.003	1
PERCENT ANOMALIES	1.6	3
TOTAL SCORE		40
FISH COMMUNITY CATEGORY		GOOD (SLIGHTLY IMPAIRED)

Table 15. Habitat evaluation for Red Cedar River (1st Order), June 26-27, 1991.

HABITAT METRIC	STATION 1 SCORE	STATION 2 SCORE	STATION 11 SCORE	STATION 12 SCORE	STATION 13 SCORE
Bottom Substrate Available Cover:	0	2	5	3	12
Embeddedness:	0	3	6	2	11
Velocity:Depth:	1	10	12	3	11
Flow Stability:	4	11	10	9	10
Bottom Deposition:	1	7	3	2	9
Pools-Riffles-Runs-Bends:	0	7	7	3	4
Bank Stability:	2	6	8	3	6
Bank Vegetative Stability:	4	5	6	3	9
Streamside Cover:	9	9	5	5	9
TOTAL SCORE	21	60	62	33	81
HABITAT CONDITION CATEGORY	POOR (SEVERELY IMPAIRED)	FAIR (MODERATELY IMPAIRED)	GOOD (SLIGHTLY IMPAIRED)	POOR (SEVERELY IMPAIRED)	EXCELLENT (NON-IMPAIRED)
Date:	June 24, 1991	June 24, 1991	June 26, 1991	June 26, 1991	June 26, 1991
Stream Type:	Warmwater	Warmwater	Warmwater	Warmwater	Warmwater
Weather:	Sunny	Sunny	Sunny	Sunny	Sunny
Stream Order:	First	First	First	First	First
Air Temperature:	77 Deg. F.	74 Deg. F.	78 Deg. F.	85 Deg. F.	74 Deg. F.
Water Temperature:	60 Deg. F.	58 Deg. F.	67 Deg. F.	65 Deg. F.	68 Deg. F.
Ave. Stream Width:	15 Feet	12 Feet	12 Feet	10 Feet	8 Feet
Ave. Stream Depth:	0.5 Feet	0.33 Feet	0.5 Feet	0.5 Feet	0.5 Feet
Surface Velocity:	0.1 Ft./Sec.	1 Ft./Sec.	0.75 Ft./Sec.	0.5 Ft./Sec.	1.5 Ft./Sec.
Estimated Flow:	1 CFS	4 CFS	4 CFS	2 CFS	6 CFS

Table 16. Habitat evaluation for Red Cedar River (2nd Order), June 24-27, 1991.

HABITAT METRIC	STATION 3 SCORE	STATION 4 SCORE	STATION 14 SCORE
Bottom Substrate Available Cover:	3	3	6
Embeddedness:	2	5	6
Velocity:Depth:	11	6	8
Flow Stability:	9	7	4
Bottom Deposition:	3	2	6
Pools-Riffles-Runs-Bends:	5	1	9
Bank Stability:	5	6	3
Bank Vegetative Stability:	8	8	5
Streamside Cover:	9	5	6
TOTAL SCORE	55	43	53
HABITAT CONDITION CATEGORY	POOR (SEVERELY IMPAIRED)	POOR (SEVERELY IMPAIRED)	POOR (SEVERELY IMPAIRED)
Date:	June 24, 1991	June 24, 1991	June 27, 1991
Stream Type:	Warmwater	Warmwater	Warmwater
Weather:	Ptly Cl.	Ptly Cl.	Sunny
Stream Order:	Second	Second	Second
Air Temperature:	74 Deg. F.	86 Deg. F.	81 Deg. F.
Water Temperature:	66 Deg. F.	78 Deg. F.	69 Deg. F.
Ave. Stream Width:	15 Feet	12 Feet	25 Feet
Ave. Stream Depth:	1.5 Feet	0.5 Feet	2 Feet
Surface Velocity:	0.5 Ft./Sec.	0.5 Ft./Sec.	0.5 Ft./Sec.
Estimated Flow:	11 CFS	3 CFS	25 CFS

Table 17. Habitat evaluation for Red Cedar River (3rd Order), June 24-26, 1991.

HABITAT METRIC	STATION 5 SCORE	STATION 6 SCORE	STATION 7 SCORE	STATION 8 SCORE	STATION 9 SCORE
Bottom Substrate Available Cover:	4	12	8	9	6
Embeddedness:	3	10	7	6	6
Velocity:Depth:	5	9	7	7	7
Flow Stability:	10	10	9	9	9
Bottom Deposition:	5	9	6	6	2
Pools-Riffles-Runs-Bends:	4	8	6	7	4
Bank Stability:	7	7	8	6	6
Bank Vegetative Stability:	6	9	9	9	7
Streamside Cover:	8	9	9	8	7
TOTAL SCORE	52	83	69	67	54
HABITAT CONDITION CATEGORY	POOR (SEVERELY IMPAIRED)	GOOD (SLIGHTLY IMPAIRED)	FAIR (MODERATELY IMPAIRED)	FAIR (MODERATELY IMPAIRED)	POOR (SEVERELY IMPAIRED)
Date:	June 25, 1991	June 24, 1991	June 25, 1991	June 25, 1991	June 26, 1991
Stream Type:	Warmwater	Warmwater	Warmwater	Warmwater	Warmwatr
Weather:	Ptly Cl.	Ptly Cl.	Sunny	Ptly Cl.	Sunny
Stream Order:	Third	Third	Third		Third
Air Temperature:	71 Deg. F.	79 Deg. F.	78 Deg. F.	76 Deg. F.	77 Deg. F.
Water Temperature:	67 Deg. F.	68 Deg. F.	74 Deg. F.	71 Deg. F.	73 Deg. F.
Ave. Stream Width:	25 Feet	30 Feet	25 Feet	35 Feet	35 Feet
Ave. Stream Depth:	2 Feet	3 Feet	3 Feet	3.5 Feet	2 Feet
Surface Velocity:	0.5 Ft./Sec.	0.25 Ft./Sec.	0.5 Ft./Sec.	0.3 Ft./Sec.	0.25 Ft./Sec.
Estimated Flow:	25 CFS	22 CFS	38 CFS	37 CFS	18 CFS

Table 18. Habitat evaluation for Red Cedar River (4th Order), June 27-28, 1991.

HABITAT METRIC	STATION 10 SCORE	STATION 15 SCORE	STATION 16 SCORE	STATION 17 SCORE	STATION 18 SCORE
Bottom Substrate Available Cover:	11	7	15	15	7
Embeddedness:	14	8	15	12	6
Velocity:Depth:	16	2	17	16	6
Flow Stability:	10	8	11	11	9
Bottom Deposition:	9	5	10	5	5
Pools-Riffles-Runs-Bends:	10	3	12	10	6
Bank Stability:	8	8	5	4	8
Bank Vegetative Stability:	9	8	7	6	6
Streamside Cover:	9	5	8	6	6
TOTAL SCORE	96	54	100	85	59
HABITAT CONDITION CATEGORY	EXCELLENT (NON-IMPAIRED)	POOR (SEVERELY IMPAIRED)	EXCELLENT (NON-IMPAIRED)	GOOD (SLIGHTLY IMPAIRED)	POOR (SEVERELY IMPAIRED)
Date:	June 27, 1991	June 27, 1991	June 28, 1991	June 21, 1991	June 28, 1991
Stream Type:	Warmwater	Warmwater	Warmwater	Warmwater	Warmwater
Weather:	Sunny	Sunny	Sunny	Sunny	Sunny
Stream Order:	Fourth	Fourth	Fourth	Fourth	Fourth
Air Temperature:	74 Deg. F.	84 Deg. F.	74 Deg. F.	78 Deg. F.	80 Deg. F.
Water Temperature:	71 Deg. F.	76 Deg. F.	74 Deg. F.	73 Deg. F.	77 Deg. F.
Ave. Stream Width:	40 Feet	65 Feet	45 Feet	60 Feet	60 Feet
Ave. Stream Depth:	3 Feet	3 Feet	2 Feet	1.5 Feet	3 Feet
Surface Velocity:	0.5 Ft./Sec.	0.25 Ft./Sec.	1 Ft./Sec.	0.5 Ft./Sec.	0.75 Ft./Sec.
Estimated Flow:	60 CFS	49 CFS	90 CFS	45 CFS	135 CFS

Table 20. Water chemistry results from the Red Cedar River, June 24-28, 1991.

Parameter	St. 1	St. 2	St. 3	St. 4	St. 5	St. 6	St. 7	St. 8	St. 9
Ammonia (mg N/l)	0.44	0.053	0.089	0.093	0.084	0.087	0.043	0.048	0.056
Kj. Nitrogen (mg N/l)	1.57	0.47	0.65	0.87	0.96	0.92	0.65	0.68	0.87
Nitrate+Nitrite (mg N/l)	0.25	0.42	0.71	0.196	0.50	0.51	0.42	0.62	0.93
TOC (mg/l)	10	4.8	6.8	8.8	7.8	8.2	7.4	8.0	8.3
Tot. Phosphorus (mg P/l)	0.144	0.04	0.057	0.079	0.079	0.088	0.058	0.062	0.11
Arsenic (ug/l)	--	--	--	--					--
Cadmium (ug/l)	--	--	--	--	K 20	K20	K 20	K 20	--
Chromium (ug/l)	--	--	--	--	K 25	K 25	K 25	K 25	--
Copper (ug/l)	--	--	--	--	K 20	K 20	K 20	K 20	--
Iron (ug/l)	--	--	--	--	--	--	--	--	--
Lead (ug/l)	--	--	--	--	K 50	K 50	K 50	K 50	--
Nickel (ug/l)	--	--	--	--	K 50	K 50	K 50	K 50	--
Silver (ug/l)	--	--	--	--	--	--	--	--	--
Zinc (ug/l)	--	--	--	--	K 50	K 50	K 50	K 50	--

Parameter	St. 10	St. 11	St. 12	St. 13	St. 14	St. 15	St. 16	St. 17	St. 18
Ammonia (mg N/l)	0.071	0.077	1.5	0.070	0.058	0.068	0.065	0.036	0.058
Kj. Nitrogen (mg N/l)	0.83	1.19	3.1	0.94	0.76	0.99	0.87	0.8	0.81
Nitrate+Nitrite (mg N/l)	0.82	1.57	7.5	0.96	1.6	1.26	1.3	1.32	1.34
TOC (mg/l)	8.4	10	11	12	6.6	8.4	7.6	7.2	7.6
Tot. Phosphorus (mg P/l)	0.068	0.28	0.31	0.09	0.087	0.133	0.107	0.092	0.103
Arsenic (ug/l)	4.5	--	--	--	3	3.5	3.1	3.4	3.4
Cadmium (ug/l)	K 2	--	--	--	K 0.2	K 0.2	K 0.2	K 0.2	0.4
Chromium (ug/l)	1.9	--	--	--	K 1	K 1	K 1	K 1	K 1
Copper (ug/l)	3.2	--	--	--	1.2	3.2	2.6	2.1	2.4
Iron (ug/l)	759	--	--	--	617	1400	728	381	291
Lead (ug/l)	1.7	--	--	--	K 1	K 1	K 1	K 1	1.2
Nickel (ug/l)	K 2	--	--	--	K 2	K 2	K 2	K 2	K 2
Silver (ug/l)	K 0.5	--	--	--	K 0.5	K 0.5	K 0.5	K 0.5	K 0.5
Zinc (ug/l)	5.2	--	--	--	K 4	6.4	4.6	K 4	6.9

Appendix 1. Specific station locations for the Red Cedar River, June 24-2

Station #	County	Location
1	Livingston	Coon Lake Rd.
2	"	Radio Tower Rd.
3	"	Smith Rd.
4	"	Mason Rd. (Middle B. R.C.R.)
5	"	Garden Lane
6	"	Grand River Ave.
7	"	Gregory Rd.
8	"	Stow Rd.
9	"	Grand River Ave. (W.B. R.C.R.)
10	Ingham	Gramer Rd.
11	"	Pardee Rd. (Kalamink Crk.)
12	"	Moyer Rd. (Wolf Crk.)
13	"	Rowley Rd. (Squaw Crk.)
14	"	Linn Rd. (Doan Crk.)
15	"	Williamston Rd.
16	"	Beeman Rd. (d/s of Williamston WWTP)
17	"	Okemos Rd.
18	"	Kalamazoo St.

APPENDIX P

APPENDIX P

LABORATORY REPORTS
SPL – FINGERPRINT ANALYSIS

APPENDIX G

LABORATORY REPORTS
SPL – FINGERPRINT ANALYSIS

MICHIGAN LABORATORY
459 HUGHES DRIVE
TRAVERSE CITY, MICHIGAN 49686
PHONE (231) 947-5777
FAX (231) 947-7455

LABORATORY REPORT

SPL WORKORDER NUMBER(s): **00-09-231**

Prepared for: **URS CORPORATION**

Sampled By: URS CORPORATION

Site: FOWLERVILLE, MI

Project: JCI RFIP.3

Approved by:

S. L. Grenda, Laboratory Manager

Date: SEP 2 9 2000

Gary R. Byar, Project Manager

The results relate only to the samples tested.
All results are reported on an as is (wet) basis, except where otherwise indicated.
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9880 Interchange Drvie
Houston, TX 77054
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Scott, LA 70583
(337) 237-4775

SPL - Michigan
459 Hughes Drive
Traverse City, MI 49686
(231) 947-5777

MICHIGAN LABORATORY
459 HUGHES DRIVE
TRAVERSE CITY, MICHIGAN 49686
PHONE (231) 947-5777
FAX (231) 947-7455

Certificate of Analysis No. M1-0009231-01

URS CORPORATION
644 Linn Street Suite 501
Cincinnati, OH 45203
ATTN: Mike Wagner

DATE: 09/20/2000

PROJECT: JCI RFIP.3
SITE: FOWLERVILLE, MI
SAMPLED BY: URS CORPORATION
SAMPLE ID: MWC3FP

PROJECT NO: 20209-016-121
MATRIX: PRODUCT
DATE SAMPLED: 07/11/2000 17:15:00
DATE RECEIVED: 09/14/2000

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS

The majority of hydrocarbons detected in the sample of free product submitted were in the c10 to c20 range. This is the normal range for kerosene. The analysis also shows the absence some of the normal alkanes present in fresh kerosene. This would indicate that the product is highly weathered and probably has been exposed to the environment for a long time.

Finger Print 09/18/2000
Method 8000A ***
Analyzed by: SLG
Date: 09/18/2000 12:00:00

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance. Soil results reported in dry weight.

MICHIGAN LABORATORY
459 HUGHES DRIVE
TRAVERSE CITY, MICHIGAN 49686
PHONE (231) 947-5777
FAX (231) 947-7455

Certificate of Analysis No. M1-0009231-01

URS CORPORATION
644 Linn Street Suite 501
Cincinnati, OH 45203
ATTN: Mike Wagner

DATE: 09/28/2000

PROJECT: JCI RFIP.3
SITE: FOWLERVILLE, MI
SAMPLED BY: URS CORPORATION
SAMPLE ID: MWC3FP

PROJECT NO: 20209-016-121
MATRIX: PRODUCT
DATE SAMPLED: 07/11/2000 17:15:00
DATE RECEIVED: 09/14/2000

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Finger Print Method 8000A *** Analyzed by: SLG Date: 09/18/2000 12:00:00	09/18/2000		
Ignitability Method 1010 *** Analyzed by: MD Date: 09/20/2000	ND	180	°F
Waste Dilution Extraction Method 3580A *** Analyzed by: J_L Date: 09/22/2000 13:10:00	09/22/2000		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

COMMENTS: SPL Houston Lab Reference #00090552-01

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance. Soil results reported in dry weight.

MICHIGAN LABORATORY
459 HUGHES DRIVE
TRAVERSE CITY, MICHIGAN 49686
PHONE (231) 947-5777
FAX (231) 947-7455

Certificate of Analysis No. M1-0009231-01

URS CORPORATION
644 Linn Street Suite 501
Cincinnati, OH 45203
ATTN: Mike Wagner

DATE: 09/28/2000

PROJECT: JCI RFIP.3
SITE: FOWLERVILLE, MI
SAMPLED BY: URS CORPORATION
SAMPLE ID: MWC3FP

PROJECT NO: 20209-016-121
MATRIX: PRODUCT
DATE SAMPLED: 07/11/2000 17:15:00
DATE RECEIVED: 09/14/2000

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
PCB-1016	ND	50	mg/Kg
PCB-1221	ND	50	mg/Kg
PCB-1232	ND	50	mg/Kg
PCB-1242	ND	50	mg/Kg
PCB-1248	630	50	mg/Kg
PCB-1254	ND	50	mg/Kg
PCB-1260	ND	50	mg/Kg

SURROGATES	% RECOVERY
Tetrachloro-m-xylene	D
Decachlorobiphenyl	D

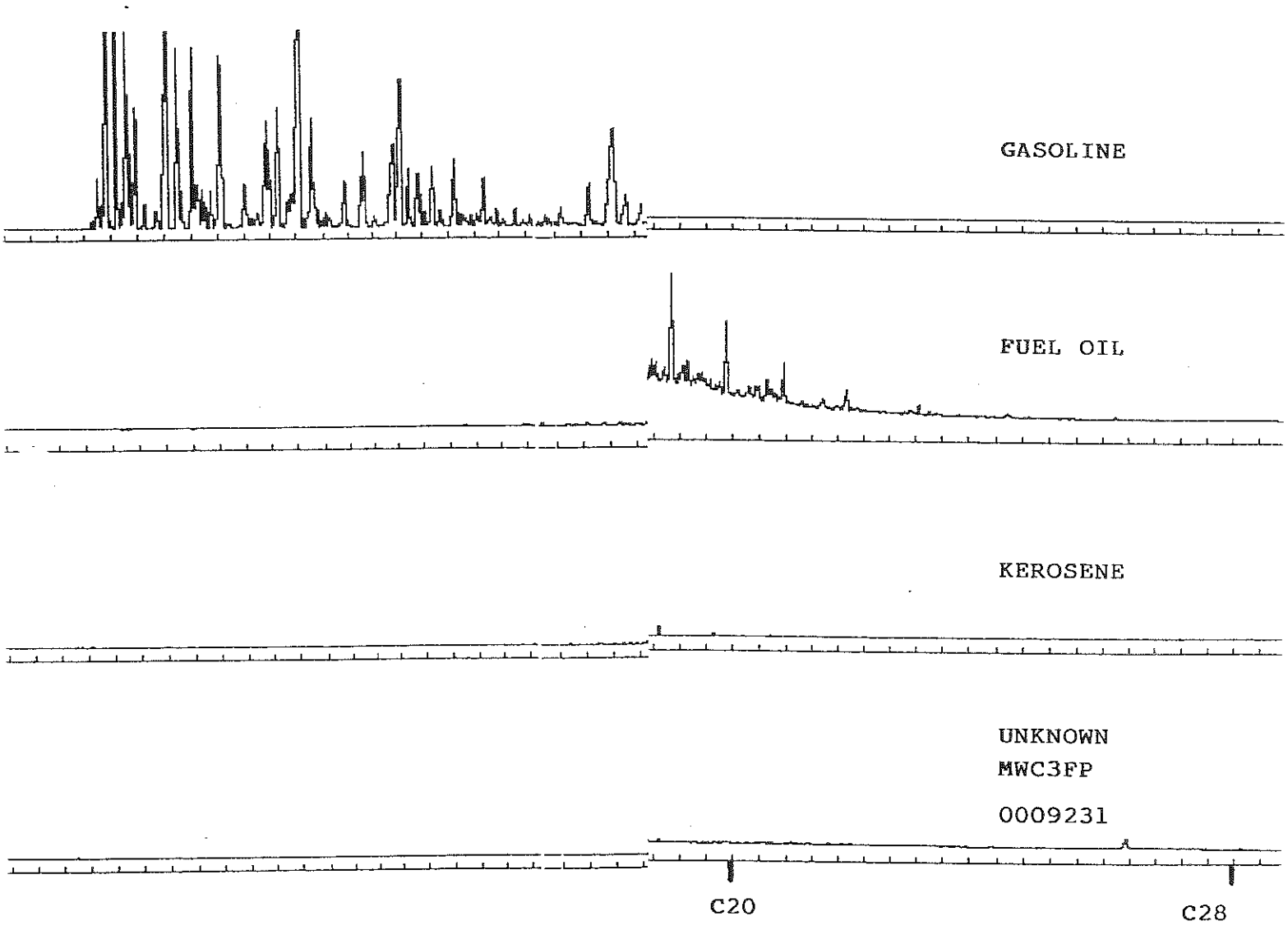
ANALYZED BY: AR DATE/TIME: 09/27/2000 13:46:00
EXTRACTED BY: J_L DATE/TIME: 09/22/2000 13:10:00
METHOD: 8080 SW846
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance. Soil results reported in dry weight.

MICHIGAN LABORATORY
459 HUGHES DRIVE
TRAVERSE CITY, MICHIGAN 49686
PHONE (231) 947-5777
FAX (231) 947-7455

QUALITY CONTROL DOCUMENTATION


GASOLINE
FUEL OIL
KEROSENE
UNKNOWN
MWC3FP
0009231
C20
C28

SPL Environmental Laboratories, Inc.
459 Hughes Drive
Traverse City, MI 49686
(231) 947-5777 Fax: (231) 947-7455
Contact: Steve Grenda

Page 1 of 1

Analysis Request and Chain of Custody Recor

0009231

Temp: | Store: Bowl (Garage

Project No.	Company/Project Name	Project Location
20209-016-121	JCI RFI P.3	Fowlerville, Michigan

Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container No.	Sample Container Size	Sample Type (Liquid, Soil Sludge, Etc.)	Preservative	ANALYSIS REQUESTED Test	ANALYSIS REQUESTED Method	Remarks
MWC3 FP	7/11/00 / 1110	✓		1	1L	Liquid (FP)	None	Fingerprint w/Dist & FP	GPA ASTM D86 1010	Please call Mike Wagner when received. Would also like to analyz for PCBs (513) 651-3440
										Thanks, MAW

Samplers: (Signature)	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
Dennis Connair	[signature]	7/25/00 1600			
Affiliation:	**Relinquished by: (Signature)**	**Date: Time:**	**Received by laboratory: (Signature)**	**Date: Time:**	**Intact**
URS (CIN)			[signature]	9-14-00 10:30	

REPORT TO: CONSULTANT'S NAME & ADDRESS:
URS
644 Linn Street Suite 501 Cincinnati, Ohio 45203

CONSULTANT'S PHONE #: (513) 651-3440

CONSULTANT'S W.O./JOB #: CIN-S-0700-0070

INVOICE TO: Same

PROJ. MGR.: Mike Wagner

REMARKS:
thanks, Steve!